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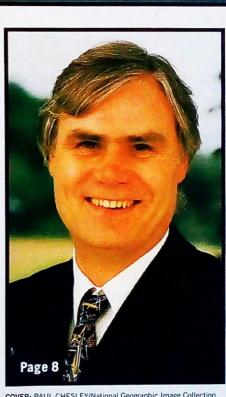
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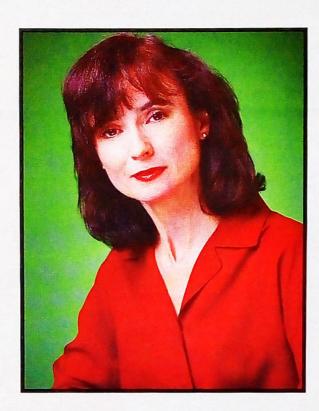
Forbidden Fruit

BY JANET STILSON

n the middle of the millenium that has been ours, a wary friendship blossomed in China between two people. It reminds me of the relationship that the mainland now holds with Western nations and, by extension, their pay TV and telecommunications businesses.

In 1583, the Jesuit priest Matteo Ricci went to China with the goal of penetrating the Forbidden City. He was apparently an extraordinary linguist, as well as a scientist, geographer and mathematician. And he wanted to offer his services to Wanli, the Ming emperor at that time, as a means of spreading his religious beliefs. He had to wait 18 years to receive government permission to go to Beijing. And even then, the only reason he finally was summoned to the Forbidden City itself was because one of the gifts he had sent, a clock, broke down, and none of the emperor's eunuchs knew how to fix it.

Eventually, Wanli struck up a correspondence with Ricci, asking questions about life in Europe. But despite his curiosity, the Emperor could never bring himself to actu-



It has sometimes seemed that for every door that's been opened to Westerners in China, another is closed in their faces.

ally meet the Jesuit face to face. Instead, he had portraits of Ricci painted so that he could see what he looked like.

I was reminded of this story as I edited the feature from Willie Brent in this issue concerning the extremely significant changes that are taking place in the Chinese TV business these days.

What you won't find in the story is a lot of evidence that Western companies are making huge inroads into that market, despite all of their dreams of doing so. But China is obviously starting to paint "portraits" that resemble Western pay TV patterns and structures — everything from *Jerry Springer*-like shows to the stock listing of one company with an agenda that may not rival Time Warner Inc. to-day, but just might tomorrow.

It's presumptuous to assume that any country is obliged to accept products, let alone religion, from the West. But it has sometimes seemed that for every door that's been opened to Westerners in China, another is closed in their faces. Perhaps the biggest "slam" on that front has involved increasing restrictions on overseas investments in Internet-related companies.

I'm delighted, however, to see a potential reversal of that decision and an expected opening of the telecoms sector to foreign investors, as part of China's agreement with the U.S. concerning China's entry into the World Trade Organization.

Meanwhile, overseas programmers (who face stiff restrictions in China) continue to monitor the practice by cable systems and individuals of illegally picking up overseas channels on dishes, despite the country's crackdown earlier this year. Illegal DTH just isn't going away.

It is interesting to note that while Ricci and his fellow missionaries were never granted an official "blessing" to occupy their mission in Beijing, they were never asked to leave either. As Ricci so clearly showed, patience and perseverance are necessary virtues in China.

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BLIPS ON THE SCREEN

The Madness of Zone Vision

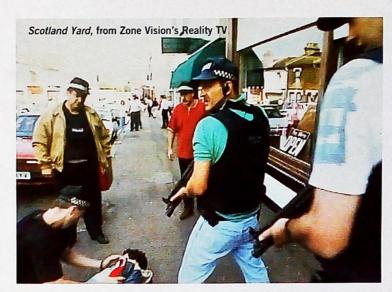
LONDON

BY JANET STILSON

t's only fitting that a company called Zone Vision would L choose to house itself in a residential section of London that's far from most media companies in that city. While many have gravitated toward the trendy West End and Soho areas, Zone Vision's nerve center is found behind a rather jarringly yellow and green façade in the Willesden/Kilburn area. And that location — combined with an interior that is best described as "just moved in" provides a sort of visual testament to the company's off-the-beatentrack agenda.

Zone Vision has become one of the most prolific suppliers of program channels in Europe's version of the Wild West — the central and eastern regions of the continent. Pick just about any major United States-based channel with aspirations in that area, and there's a fighting chance that it counts Zone Vision as its affiliate representative. Network groups Turner International, MTV International and Discovery Communications Inc. are all in the mix. On their behalf, Zone Vision has worked hard to turn many a cable operator with a penchant to pirate signals into honest, paying customers.

In addition to that business,



Zone Vision has accumulated a critical mass of its own original channels created specifically for

the region — channels that are now migrating to other markets, including the United Kingdom and the Middle East.

"It's complete madness, what's going on around here," reports the angular and hip Chris Wronski, a Warsaw native who in 1991 left managing rock bands and arranging concert tours to establish Zone Vision. At the time, his main aim was to syndicate programming in Central and Eastern Europe. And he took as his collaborator a former client, Chris Sharp, who was handling program sales for a now-defunct channel called Music Box.

Program sales are still part of the focus. But much of the "madness" in which Wronski and Sharp are embroiled now involves the new channels. At one point, "we put the magic number of channels we wanted to create at 10, but now we've outgrown that idea," says Wronski, who serves as Zone Vision's president and CEO. "We'll have 10 by the end of the year." Not bad for a company that only started launching original channels a year and a half ago.

In October, Zone Vision bought a 50 percent stake in the European operations of an action-adventure men's channel called Quest TV, which already had distribution in Poland. According to Sharp, who serves as Zone Vision's managing director,

Quest's next quest is Russia.

That deal was quickly followed by the November launch of a kids' channel, Fantastic, which is first emerging in Poland. And Zone Vision was scheduled to launch yet another service, Reality TV, on Dec. 1. True to its name, Reality TV is a mix of reallife and documentary programming. It's a joint venture with another one of Europe's prolific channel creators, United Pan-Europe Communications N.V. (UPC) — a company that also ranks as Europe's largest private multiple system operator.

The new launches don't stop there. Zone Vision's established telenovela channel, Romantica, also debuted a Croatian feed recently, and this month it will add one for Hungary. Other established channels include Le Cinema, which focuses on European films; an Eastern European version of E! Entertainment Television; a Polish general-entertainment channel called Telewizja Miejska that features programming from local operators; and the racy Midnight Blue.

Blue is a horse of a different color for Zone Vision because it's shown outside of the company's region of choice, on British Sky Broadcasting Group plc's direct-to-home platform. The U.K. service runs Blue as an after-midnight, four-hour block, selling it on a pay-per-night basis. However, Blue isn't the only channel spilling into other regions. Romantica is the subject of sales talks in Israel, Greece, Turkey and the Middle East, according to Sharp.

Among all the channels Zone Vision offers, Romantica gets the most kudos from Nimrod Kovacs, chairman of UPC's Central European Group. He's also enthusiastic about Le Cinema — particularly as it's carved out such a rare and worthy niche, European movies. On the flip side, Kovacs

Growing Up (and Out) In Germany's Program Biz

FRANKFURT

BY DIETER BROCKMEYER

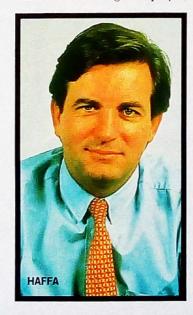
wo years ago, if you'd asked most people involved in the TV business outside of Germany what EM.TV & Merchandising A.G. was, you would have been met with a lot of vacant stares. To tell the truth, not too many people within Germany knew the company either.

But since then, EM.TV has earned itself a reputation. It still has a long way to go to gain the notoriety of some of Europe's media bigwigs like Canal Plus S.A. But its connections to heavyweights such as News Corp. and Germany's Kirch Group have given it a certain visibility. And that is all the more pronounced at the MIPCOM and MIP-TV program markets, where EM.TV's bright yellow posters and cars advertising its Junior kids' programming company seem to be everywhere along Cannes' main boulevard, La Croisette.

If all of that weren't enough to

get it some attention, EM.TV's stock, which trades on Germany's Neuer Markt, similar to the Nasdaq of the U.S., has. Since EM.TV went public two years ago, its shares have split twice, including a 25-for-one split. At press time, they were trading at 5,500 Deutsche marks (\$US2,941).

Today, the group is working hard to become a global player,



with high hopes of finalizing a deal with some United States-based program companies. "We always said we intended to become an international player, and globalization is our major task," says Thomas Haffa, chairman and founder of the young upstart.

In explaining part of his success to date, Haffa says, "Sometimes you need some luck." He's referring specifically to his deal with Kirch for Junior, a 50-50 joint venture between the two companies. When the two formed their alliance a year ago, Haffa was largely involved in the licensing and merchandising of children's products for the German market.

The joint venture gave EM.TV access to more than 25,000 half-hours of Junior-branded children's shows. In turn, the 500 million Deutsche mark (\$US270 million) infusion from EM.TV enabled Kirch to survive the battle to maintain its dominance of Germany's pay TV

Continued on Page 8

Continued on Page 8



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The Global Orbiter

Europe-based Satellite Operator SES Looks to the Americas to Survive and Thrive

CHATEAU DE BETZDORF

BY DIETER BROCKMEYER

ate last year, people involved in the satellite business sat up and took notice when one of Europe's most prominent satellite companies, Société Européenne des Satellites S.A. (SES), agreed to acquire a stake in a bird company of equal stature in the Pacific Rim, Asia Satellite Telecommunications Co. Ltd. (AsiaSat). And if SES director general Romain Bausch has his way, there will be some more sitting up before this year is through.

Bausch is bent on following the investment in AsiaSat by infiltrating the Americas, thereby becoming a truly global enterprise. This isn't just a matter blind ambition. If SES wants to survive, it must be part of an international network. At least that's the opinion of Bausch and some outside observers.

"For the moment, SES is positioned very well," explains one senior executive of a European media company. "But if they fail to expand globally, they eventually will come

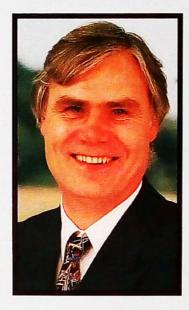
into a disadvantage to their competitors that are able to do so."

For a company with such vast goals, SES comes from a rather quaint locale. It's based in Luxembourg, which is still ruled by (or at least represented by) a grand duke. Indeed, SES resides at the charming Chateau de Betzdorf, the former summer residence of Grand Duke Jean's family. Its eight Europe-directed Astra birds all operate from one orbital fiefdom that is the little state's domain as well — 19.2 degrees East.

Those aren't SES's only ties to the state. While the company is traded on the Luxembourg and Frankfurt stock exchanges, the Luxembourg state bank also holds shares in the company.

"SES is an interesting company," says Michael Schatzschneider, an analyst with Germany's Berliner Handels und Frankfurter Bank, "especially considering their position in Germany."

Of Astra's total European base 30 million satellite dishes, some 12 million are in Germany. That represents 36 percent of the coun-



"Our globalization strategy goes hand in hand with our multimedia strategy."

— Romain Bausch, director general, Société Européenne des Satellites S.A. try's TV households. The second largest market for SES is Britain, with a base of 4.5 million dishes. In other territories, the race between SES and its direct competitor, Eutelsat, is much more balanced, with Eutelsat taking the lead in markets such as Poland.

SES's financial results are also pretty rosy. For the first half of this year, revenue rose 36 percent to 340 million euros (\$US328 million). Those results were the first to include AsiaSat. But even without it, revenue leapt 20 percent. Merrill Lynch & Co. expects net income to increase by 11.2 percent by the end of this year, to 205 million euros (\$US198 million).

Despite SES's considerable mass today, it just won't be enough in the future. "We always said that we expect the satellite business to consolidate [globally, and] also here in Europe," Bausch says. He predicts the European satellite business will narrow down to only two satellite firms. Today, many companies that were once state telco monopolies still run their own regional satellite businesses.

"Our globalization strategy goes hand in hand with our multimedia strategy," Bausch explains. He refers to conducting business with corporate clients, such as airline companies, that need to deliver huge amounts of data to their offices around the world.

The AsiaSat acquisition is structured to give SES a 49.5 percent stake in AsiaSat's Bermuda-based holding company, Bowenvale Ltd. A Chinese investor, China International Trust and Investment Corp., holds the remaining 50.5 percent.

As for the Americas, Bausch says there will likely be more than one investment, because the two continents are split between a number of different satellite players. "We are in talks, and we are optimistic that we can stick to our internal schedule and get [a deal] finished before this year is over," he says. That deadline is drawing dangerously close. But given what he's accomplished so far, it's safe to say that he's not just contemplating castles in the sky — or chateaus, for that matter.

EM.TV,

Continued from Page 6 scene, according to analysts.

Augmenting EM.TV's programming thrust was its acquisition in October of a 45 percent stake in Herbert Kloiber's TeleMünchen Group, which cost Haffa about 800 million Deutsche marks (US\$432 million).

Kloiber, one of Germany's more prominent program players, is a Kirch veteran, just like Haffa. The empire that he built through TeleMünchen includes cinema production and distribution, licensing and channel holdings. In fact, TeleMünchen currently ranks as Germany's second largest programming company, behind Kirch.

Among TeleMünchen's channel holdings are two German networks, general-entertainment-focused RTL2, and tm3, which until recently targeted women. When Kloiber sold part of his interest in tm3 to News Corp. about a year ago, that all started to change, with the network turning toward sports

in an effort to boost its ratings.

Through its investment in TeleMünchen, Haffa is now riding News Corp.'s wave as it tries to make tm3 the German powerhouse channel it has always craved. TeleMünchen also has stakes in new channels in Austria and Hungary, focusing on general entertainment.

It was the longstanding desire to invest in TeleMünchen that prompted EM.TV to proceed with the stock sale. Referring to the TeleMünchen investment, Haffa says, "We needed new synergies [that] we're getting from opening up our portfolio." Junior is certainly serving as a good vehicle for some of the branching. The unit has created two channels, dubbed Junior and K-Toon, which debuted in early October on Kirch's Premiere World, the reincarnation DF1.

For the most part, Haffa expects the channels to expand their distribution as branded blocks, rather than full-fledged networks. Junior's already gained a one-hour daily program slot on Chinese terrestrial station Beijing Television. And in January, a Junior weekend block will launch on the Kirchcontrolled German terrestrial channel, Sat.1. It's also gained distribution in Switzerland.

As EM.TV globalizes Junior, it's also looking to form international partnerships on new ventures, and the U.S. is a primary target. EM.TV is particularly interested in independent players with libraries or production facilities that could complement its existing holdings. And it's interested in multiple alliances. That will enable EM.TV to maintain a certain independence and "sell our programs to any [service] available, such as Fox, Nickelodeon or whoever it may be," Haffa says.

One thing Haffa doesn't plan to do in the near term is launch any more full-fledged channels. "We're not yet big enough to limit our chances of [syndicated] program sales by such a step," he says.

Zone Vision,

Continued from Page 6 says he wishes Zone Vision provided more programming in Czech and Hungarian.

Another operator that expresses a desire for more Czech programming from Zone Vision is Robert Gardener, CEO of the Czech Republic's third largest cable operator, Tes Media Spro. However, he gives the company high praise when it comes to promoting the channels it represents and for getting involved in regulatory issues. "You can really count on the people [that Zone Vision] has here to help you solve problems," he says.

Executives at the channels that Zone Vision distributes also say the company serves a rather rare function.

"We don't use that many reps," says Jeff Cupsky, senior vice president for business development at Turner Broadcasting Systems Europe Ltd. "But it's very difficult to have enough staff to handle the

numerous operators in that region."

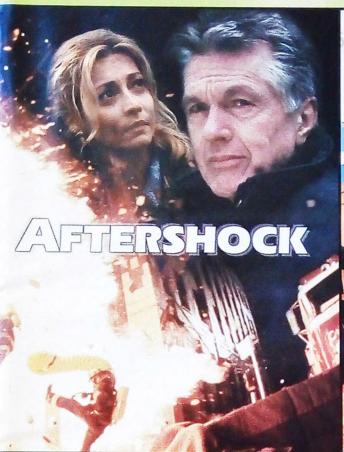
Clearly, Zone Vision envisions plenty of room for growth. And it's not doing so by creating a huge pile of debt. "We've always made a profit," claims Wronski. "We didn't have a choice. It's funded on cash flow." However, that funding flow could change. "Ideally, we'd like to go public with part of the company. We'll see," says Sharp.

Next year will likely find Zone Vision on a different growth curve than it's been on in the recent past. "Ideally, we wouldn't like to launch anymore [channels]. This year was crazy," Wronski says.

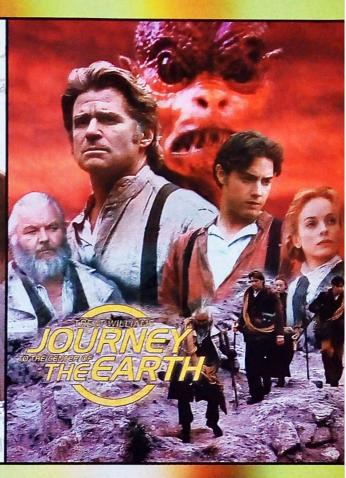
On the other hand, he can't help adding that "we're looking at on-demand and transactional television. Basically, we want to do everything that's done in the West. We want to be as close to the front as possible."

Theresa Agovino contributed to this story.

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Advertising

HotSpots

Reaping Local-Channel Rewards in the Pacific Rim

BY MAGZ OZBORNE

an-regional programmers in Asia that are bent on a localization course are starting to see the fruits of their labor pay off with greater advertising revenue. At least that's the case at a handful of companies that have increased the number of country-specific channels in recent years.

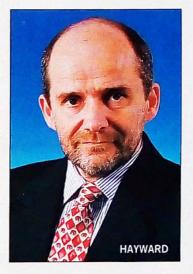
MTV Asia, which posted advertising revenue gains of 35 percent in 1997 and 1998, is expecting a similar rise this year. And part of the reason for that is local advertising. While local ad revenue once accounted for one third of all income, it now represents two thirds, according to Christopher Steward, the group's vice

president of ad sales.

MTV Networks Asia has been on a localization trend for the last few years, and currently operates three services: MTV Mandarin, MTV India and MTV Southeast Asia. Buying spots on individual channels isn't proving popular just with advertisers that are targeting specific Asian markets, Steward explains. It's also a method of choice for advertisers that want to test the impact of ads in key markets before expanding panregionally. Among them is Nokia A.B., whose IPOP icon in the shape of a cellular phone remains onscreen throughout the programming it sponsors.

Advertisers that cherry-pick local avails are also lifting the revenue of CNBC Asia, which has a "One Business Network, Five Business Channels" marketing thrust for the ad crowd. True to that slogan, CNBC has local versions in Japan, Taiwan, India and Australia, along with the panregional CNBC Asia feed.

The Taiwanese ET-CNBC and CNBC India joint-venture channels only launched in the last two months. And the Australian version is just starting to emerge. "We anticipate progressing this venture forward as soon as appropriate," said Mark Froude, vice president of international sales for Asia. "However, it is already generating strong sales interest in the market — particularly from clients who had not previously considered



CNBC" with just regional programming.

Clients so far have been extremely supportive of the concept, according to Froude. "We are winning new clients who might not be interested in panregional buys," he says. "Already, most advertisers are buying a mix, as opposed to a flat campaign, with weighting of heavier input in some markets or focusing only on regions of inter-

est." He expects that that next year, the percentage of clients buying customized packages will surpass 80 percent. "As recently as 12 months ago, we were only able to offer a single media option in the Asia region," he adds.

The trend to localize has actually served as sort of a recession-proof booster for some channels. At least, that's been the case for Discovery Channels Asia.

"In times of recession, by carefully selecting markets, advertisers can maintain a presence whilst budgets are being cut," says Gregory Ang, Discovery's senior manager for advertising sales in the region.

Localization is certainly not a new concept for Discovery, whose documentary programming has specifically dubbed or subtitled feeds for each market across the Asia-Pacific. But the best is yet to come, according to Ang. "We do anticipate that within two to three years, regional and localized ad-

Showering Ad Buyers With Options

BY JO DALLAS

s the mantra for local advertising crescendos, one Latino-wide network claims to have found a way to provide a veritable feast of extremely targeted options to its advertisers.

At splashy events across the region, The Weather Channel Latin America has unveiled a technology dubbed Copy/Market Split, which allows advertisers to simultaneously beam as many as 22 versions of one spot across the region. So, when the weather gets hot in Mexico, for example, the channel can shoot soft drink advertisements to parts of the country where people are thirsting to cool down.

The Weather Channel Latin America president Eddie Ruíz explains that it is all about flexibility. "It gives an advertiser a new way of looking at media buying in Latin America," he says. "If you want, you can buy one channel, but in 22 different ways."

The super-combo option isn't just of use to advertisers conscious of the thermometer when making their spot buys, but also to those that use different brand names across the region.

Selectivity is also important to advertisers that only have a presence in certain territories, and for others that may face territorial restrictions



The Weather Channel Latin America's Copy/ Market Split allows advertisers to simultaneously beam as many as 22 versions of one spot across the region. Above, a national split.

because of local trade regulations.

Based on a high-end Silicon Graphics Inc. technology, Copy/Market Split is installed at cable headends. It works by reading the trafficking instructions off the satellite feed to determine where to place each commercial. The Weather Channel Latin America executives think of it as creating an e-mail address for every cable operator.

As a general rule, the ability of advertisers to target ads to specific markets is typically restricted by the number of satellite feeds a given programmer operates. While local or regional feeds are becoming more common, many networks only have two feeds blanketing Latin America — one for Brazil, and another for Spanish-speaking countries.

Certainly, The Weather Channel's proposition earns respect from Michael Fox, vice president of worldwide advertising sales at ESPN Inc. "I have to give them credit for offering a flexible portfolio to advertisers," he says. Fox notes just how important the local factor is: Since ESPN introduced separate feeds targeting Mexico, Argentina and Brazil, the channel has seen ad revenues rise "substantially."

Then again, determining how to be as local as possible in advertising was a natural for The Weather Channel because of its need to offer local weather reports. Significantly, the channel's parent network in the U. S. is tracking the Latino network's ad performance before deciding whether to adopt the same system Stateside.

The prospect of offering specific regions incountry has stoked creativity at InterMedios, the ad rep firm that represents The Weather Channel in Mexico.

For starters, the InterMedios sales force is in talks with Grupo Modelo S.A., a leading Mexican brewery, about triggering its beer ads only when the temperature shoots above 30 degrees centigrade (86 degrees Fahrenheit).

"We want to be as creative as possible" with this technology, says InterMedios operations manager Enrique Baranda Bolaños. "We're also looking to talk with pharmaceutical companies about advertising their cold and flu remedies when there's a cold spell."

The Weather Channel officials say the technology has been hawked only for about the last few months, so it's too early to know to what extent it has helped boost advertising revenues.

Today, The Weather Channel reaches some 1.1 million subscribers in Mexico and about 5 million subscribers across the region. By comparison, some panregional networks in Latin America have managed to double that reach, with more 10 million subscribers. But as far as offering local advertising, The Weather Channel could be said, at least for now, to have found a place in the sun all to its own.

vertising sales will start taking off as cable and satellite TV becomes more of an accepted buy," he says.

It's not just a shift of ad dollars to the local level that's of note. News Corp.'s Star TV network unit is seeing a change in the types of advertisers it attracts, from multinational companies to their local operating units. Star TV's executive vice president of advertising sales, Toby Hayward, recalls that back in 1995, less than half of the company's 600 advertisers were deemed local. That compares with 75 percent of Star's 1,200 ad clients today.

While unwilling to divulge actual revenue figures or percentages, Hayward points out that Star TV revenues increased by 23 percent during its fiscal first quarter, which ended in September.

"We expect both local and international advertisers to show strong growth in light of the strengthening Asian economies," he says.

Bouncing Back: Asian Ad Spending Recovers

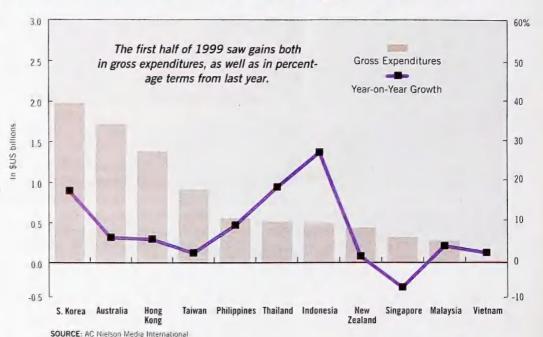
sia's advertising industry turned the corner in the first half of this year, according to a recent report from ACNielsen Media International.

Gross advertising spending rose in all but one of the 12 markets the company tracked for its AdEx International study, which bases total adspend on published rate cards and doesn't include discounts. Indonesia led the growth in percentage terms, with gross ad spending jumping 32 percent in the first half of 1999, after declining 16 percent in the year-earlier period.

According to ACNielsen Media International president Steven Yung, the growth indicates renewed confidence among consumer-goods manufacturers, retailers, informationtechnology companies,

telecommunications providers and financial-services firms.

TV ad spending was one of the leading drivers of the expansion, and leapt 29 percent in Indonesia to \$US365 million. In South Korea, it surged 24 percent to \$US614 million, while in Thailand it rose 18 percent to \$US335 million.



In China, Asia's biggest advertising market behind Japan, TV ad spending was up 8 percent to nearly \$2 billion. However, the growth rate of overall ad spending in China slowed to 3 percent, from 17 percent in the first half of 1998.

Sparking Up the Latino Biz

BY JO DALLAS AND SUSAN HORNIK

nyone plugged into the world of Latin American media buying is bound to light up when they hear the name Marcelo Salup. The Cuban-born senior vice president and regional media di-

AD EXEC

to Watch

rector for ad agency Foote Cone & Belding in Miami has, in his own way, created a lot of sparks over the years on that side of the ad business. Salup is known as a

bit of a maverick, who doesn't shy away from controversy.

Take the smoldering tiff between some Latino cable operators that have accused panregional networks of undercutting their advertising rates. In his characteristically frank fashion, Salup cuts to the chase: "If there's a situation that benefits an advertiser, then as an agency we are honor-bound to get it for them." It is an issue he thinks has been "overblown by cable operators, who should be worrying about other things like stagnant [subscriber] growth, or competition from the Internet."

Just as Salup is known for his opinions, he is also known for his pioneering spirit. In the

mid-1990s, he was one of the first ad executives to insist on rate discipline in Latin American cable advertising, recalls Irvine Plonskier, who oversees activities in the region as managing director of Young & Rubicam's media unit, The Media Edge. At that time, "some clients were paying five

times more for panregional ads than others. But Marcelo came along and really helped push for some kind of formality in pricing structure," says Plonskier.

Some clients, such as Steve Van Tassel, vice president of sales and marketing for Nabisco International, wax even more euphorically about Salup. "Marcelo is the most energetic and inspiring individual I have ever worked with in the 20 years that I have been in this business," he says.

In the early 1990s, Salup was the account manager for MasterCard International Inc., one of the first companies to embrace panregional cable advertising. And he did his homework by traveling extensively throughout the region. Indeed, since his family left Cuba in 1958, when Salup was four and amid Fidel Castro's rise to power, he has lived and worked in many parts of Latin



America, including Mexico City, Buenos Aires and Puerto Rico. He finally settled in the region's so-called capital and pay TV business hub: Miami.

Nowadays, he sees the concept of panregional advertising as "stagnant."

"At some point, there will be a realization among major regional advertisers that one size does not fit all, and that it's not that important whether a housewife in Venezuela sees exactly the same commercial brand as a housewife in Chile," he explains. And in any event, advertisers "just don't have their budgets targeted to panregional."

It's not that Salup is skeptical about the

potential of cable advertising. On the contrary, he sees advertisers buying more cable, but on the local level. The key to that is the creation of market-specific satellite feeds, something that the industry is already moving toward, he adds, noting, "Where there was once a feed for Latin America, there's now one [each] for the northern and southern cones, and Brazil. They'll become more and more local."

Over his career, Salup has become familiar with all aspects of the advertising business — whether on the creative side, in media-buying, strategic planning, or account planning and management. But always, he has relished being at the center of debate.

Today, he sits on the Advertising Advisory Council, a committee set up by leading pay TV programmers grouped under the umbrella of the Television Association of Programmers (TAP) Latin America.

Salup was one of a handful of ad executives asked to come on board precisely because "he's someone who understands the intricacies of the panregional cable-advertising market," says TAP chief operating officer Mary Pittelli. Its members are grappling with such sticky issues as ad blocking and rate structures, as well as, perhaps, less emotive issues like media measurement. But in all cases, Salup is there, delivering his opinion and defending his corner.





The Chinese government is opening new doors to local companies. And, in turn, they are dramatically changing the television business.

BY WILLIAM BRENT

ANY OF THIS CENTURY'S CHINESE REVOLUTIONaries were born in Hunan province. The first was communist revolutionary Chairman Mao Zedong. Most recently came the economic revolutionary Prime Minister Zhu Rongji. True to its reputation for spicy food and personalities, Hunan is now playing a lead role in a drama that heralds a revolution in television, as China moves into the new millennium.

And the charge is being led by one Hunan-based company in particular, Hunan Media and Entertainment (HME). Last March, it was granted permission by the central government to sell shares on one of China's two securities exchanges. HME was the first integrated media company to go public in China, and it immediately began an ambitious expansion with the 446 million yuan (\$US54 million) it raised on the market.

Although HME is still largely owned by the state, and the sum of money involved is still small by international standards, allowing partial public ownership of a media company in a nation where television has been the government's propaganda mouthpiece for more than four decades represents a seismic shift.

"HME's listing will have a major impact on the development of China's media industry," says company CEO Long Qiuyun. "Not only will it solve the long-standing problem of capital shortages, which have been holding back the industry, but it will alter the way business is done and promote rapid development of the industry."

Besides the ability to achieve previously unimagined scale for China, industry observers believe that the access to capital markets will also make television even more market-oriented, and less susceptible to political interference.

But going public isn't an easy process in China these days. After HME sold its shares, the government prohibited television production, distribution and advertising companies from listing. In addition, cable-TV companies are prevented from going public. However, consideration for new applications will be given on a case-by-case basis, and those companies (such as HME) that are already listed may remain so. This makes HME even more unusual, since it is the only company with TV production and advertising as its main business to trade shares in China.

The government decision to prevent any further listings isn't too surprising. It usually likes to allow a few experiments, and watch how they develop before broadening, or halting, the efforts.

If HME's new scale does foster development of the industry as a whole, as Long envisions, that will likely result in new opportunities for foreign involvement in technology, management expertise and production — and maybe even partial ownership. While the road ahead may be full of pitfalls, there is ample evidence that, besides the revolution in Hunan, something unusual is occurring throughout all of Chinese television.

In January, the country's first direct-to-home (DTH) platform, an initiative of China Central Television (CCTV) and the State Administration of Radio, Film and Television (SARFT), was launched with CCTV's nine channels. In October, the number of channels expanded to 39. The service, called CB Sat, currently only reaches poorer, more remote regions of China that don't have access to cable, but it has hopes of going urban and adding pay services.

In August, the SARFT formally decided to adopt a quasi-Americanstyle system for China's television industry by separating transmission from programming. By breaking up the two, channels — whether distributed by cable, satellite or terrestrial means — will no longer be producers of programming, except for news shows. Instead, they'll outsource content, thereby creating fertile ground for the emergence of powerful independent producers.

At the same time the SARFT made that move, it decided to encourage the formation of television conglomerates, which should lead to the start of a badly needed consolidation of a still very fragmented market. As a first step, provincial cable and terrestrial television interests will be required to merge, something that has already happened in Shanghai and is planned for Beijing.

In October, Hainan TV, which serves China's southernmost province, Hainan island, became the last provincial broadcaster to launch a satellite-delivered channel. Besides carriage on the DTH platform, China's 30-plus provincial satellite channels are also working hard to grow cable distribution. Shanghai Broadcasting Network (SBN), for example, claims carriage on more than 800 cable systems nation-

PHOTO_JANET STILSON

wide, making it and its provincial siblings direct competitors of CCTV

In November, a national cable network, overseen by the SARFT and the Ministry of Information Industry (MII), completed its first phase by linking five northern provinces. The network is expected to link 14 provinces by early 2000, while moving into broadband with capacity for more than 100 channels. The broadband-cable system will have the ability to provide data transmission, video-on-demand and other value-added services.

The national cable network has generated widespread attention. China is already the world's largest cable nation, with an estimated 80 million households, and it is adding between 5 million and 10 million new subscribers annually.

Increasingly aware of the potential for broadband, a handful of major Chinese companies are snapping up cable systems around the country, including in Hunan, no doubt with visions of U.S. cable giant AT&T Broadband dancing in their corporate heads.

In order to do this, cable systems have had to separate the actual cable infrastructure and the station/channel operations into separate companies. The Chinese government still prohibits any non-government body from interfering in programming and transmission, but the actual infrastructure used to deliver these programs is open to Chinese investment.

There are now about seven publicly traded companies that are investing in cable-distribution systems. Among them, HME is particularly noteworthy, because it is also pursuing a strategy of acquiring or building other components that will make it a company similar in nature to the American media giants. In fact, the so-called Hunan phenomenon is a microcosm of the direction in which Chinese television is heading.

As the advertising sales representative for four Hunan cable channels, the young upstart now controls 40 percent of all the ad revenue for Hunan Economic TV (HETV), Hunan Culture & Sports Channel, youth-oriented Hunan Life Channel and Hunan Satellite TV, a general-interest channel with national distribution via cable.

That's just the tip of the iceberg. Consider these wide-ranging plays:



In the past year, it took ownership of the cable system in the provincial capital of Changsha, opened a theme park, took an interest in an audio-visual publisher, took over management of a weekly magazine and is eyeing the Internet and e-commerce.

The revenue it receives from the four channels alone is significant, and is expected to surpass 300 million yuan (\$US36.5 million) in 1999. That's an increase of more than 400 percent from 70 million yuan (\$US8.5 million) in 1995.

The company is also on a campaign to get the channels more involved in programming, and funded what became the most popular TV drama series and some of the highest rated game shows in China this year and last.

Among the shows is Princess Huanzhu, a drama about a simple girl plucked from obscurity to be the emperor's adopted daughter. That show and its sequel were produced by HETV and took mainland China, Hong Kong and Taiwan by storm. An estimated 500 million people saw both series.

The commercial success of Hunan-produced TV programming, plus national marketing, has created a situation in which Hunan Satellite TV now has a potential national audience of 150 million people, comparable to CCTV's distribution for its cable channels.

Aware of its new strength, Hunan Satellite TV recently announced that it will try to compete head to head in 2000 with CCTV's Chinese New Year TV extravaganza, typically one of the most watched shows of the year. An idea that would be considered audacious just five years ago, Hunan's willingness to compete with CCTV reflects the degree of change in both the market and in attitudes.

"The most profound lesson that we have learned," says Wei Wenbin, a top Hunan television and propaganda official, "is that traveling the road of television and broadcast industrialization requires a fundamental shift in thinking."

HETV's talk show Rebirth of True Love is certainly a shift in thinking for China, adopting Jerry Springer-like antics. According to station executive Chen Xiaodong, the show breaks new ground in China by taking previously home-only topics and making them public. For example, a husband who has cheated on his wife goes on the show to ask his wife's forgiveness, or a mother who disapproves of her daughter's choice in husbands takes to the airwaves to defend her position.

Chen says the show has already been sold to several provincial terrestrial stations, something that is happening more and more as broadcasters seek better programming. The success of Hunan programming has spawned an avalanche of copycat shows produced by other satellite channels.

In a bid to stay one step ahead, HME's board recently approved a 90 million yuan (\$US11 million) investment in variety programming on Hunan Satellite TV, financial and entertainment programming on Hunan Life Channel, and variety and entertainment programming on Hunan Culture & Sport Channel.

In return for its investment, HME will keep 50 percent of all advertising revenue generated by the programming for the next 15 years.

Clearly, other companies have been watching what HME and its Hunan channels are doing. Following the creation of Hunan Women's Channel earlier this year, other niche channels started popping up in other cable markets. Among the most interesting is Healthy Life channel, which was recently launched by Guangzhou Cable TV, an operator that now has seven channels.

Healthy Life serves as a clear sign of where the SARFT's decision to separate broadcast from programming will take the television industry. In keeping with government regulations, Healthy Life is owned by the state, by way of the systems company. But it is managed by Guangzhou Asia-Pacific Advertising Management Ltd., a company set up by stateowned Guangzhou Radio Station, the controlling shareholder, and several individuals. Asia-Pacific, which also operates a horse racing radio station and Retail magazine, signed a threeyear contract with GZCTV, paying it annual fee for the right to manage the channel. Healthy Life and other chan-

nels with vision are all gunning for at least partial carriage on the national cable network once it is fully operational. According to SARFT officials, each province

Continued on Page 38

China's Wired Investors

Ithough Hunan Media and Entertainment is noteworthy for its investment in the cable infrastructure, it's far from the only one that is funding delivery systems. CITIC Guoan Information Technology is one of the most aggressive companies taking a position in cable. It already has stakes in cable systems in the cities of Shenyang, Liaoning province, and Wuhan, Hubei province.

CITIC Guoan recently joined forces with the Chengde government, in Hebei province near Beijing, to form Chengde Broadband Cable Television Network

PHOTO JANET STILSON

Ltd. CITIC Guoan took a 51 percent stake in the company, with the remainder held by Chengde Cable Television Network Ltd. The new company will upgrade Chengde's existing cable system, linking 340,000 cable households in eight counties and three districts, and making the network fully interactive.

The CITIC Guoan investment is another step in the

company's partnership with Hebei Cable Television Integrated Information Network. CITIC Guoan and the Hebei government have a long-term partnership that aims to connect cable systems in the province's 11 major cities and 138 counties.

Other publicly traded companies are following similar patterns:

■ Shanghai Oriental Pearl, which owns the futuristic broadcast tower for China's largest city and controls advertising for Shanghai Oriental TV, invested 116 million yuan (\$US14.1 million) to take a 29 percent

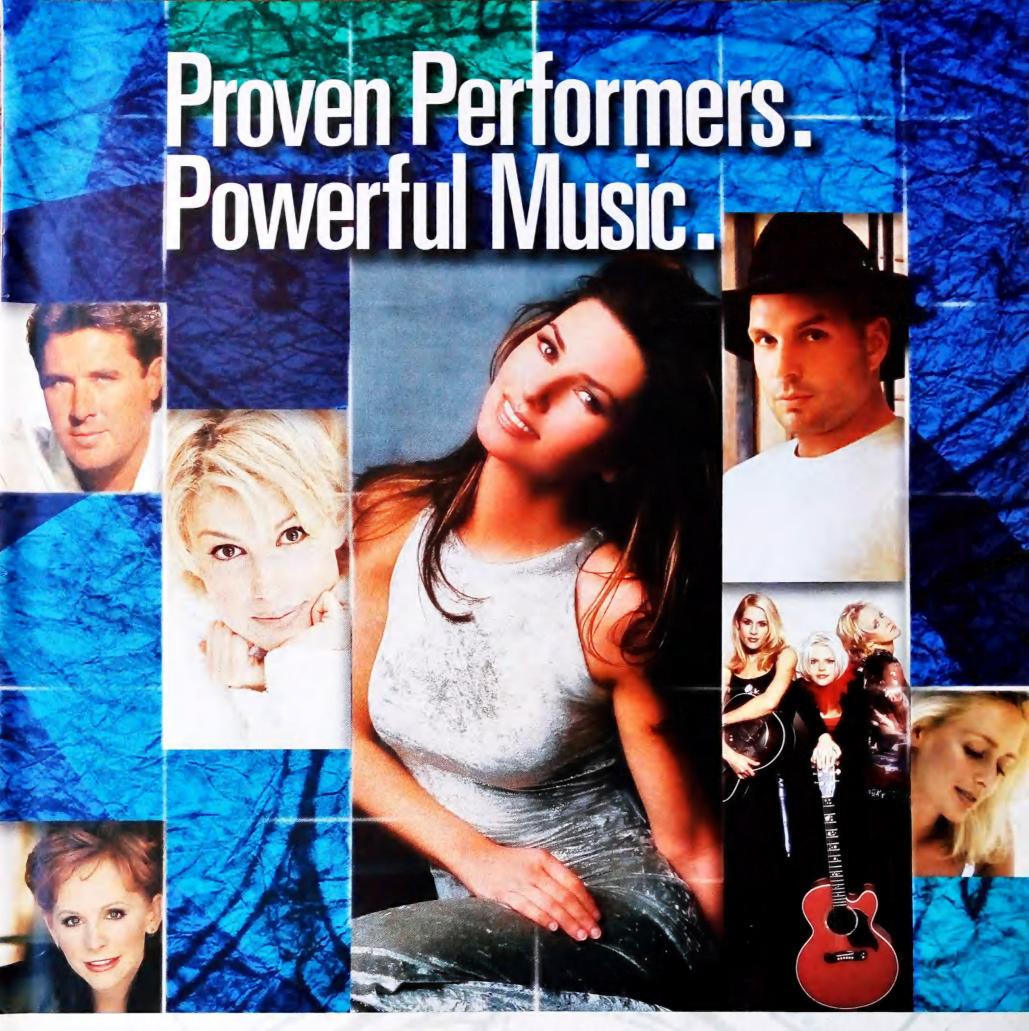
stake in the newly created Shanghai Cable Network Ltd. That company, along with Shanghai Cable TV, owns Shanghai's cable infrastructure.

- Zhejiang Xinlian, whose once-diversified holdings are increasingly focused on media, plans to invest 130 million yuan (\$US15.8 million) to purchase 49 percent of Changchun Northern Cable TV Network Ltd. It also acquired Hubei Shengguang Network Ltd., which owns 49 percent of Hubei Cable TV Network Co.
- Zhejiang Zhongda Group, based in Zhejiang province, which surrounds Shanghai, invested 147 million yuan (\$US17.9 million) to take a 49 percent

stake in Zhejiang Cable TV Network Ltd.

Qingdao Dongfang Group, which has helped the former German-settlement of Qingdao become a pioneer in value-added services via cable, invested 73.5 million yuan (\$US8.9 million) to buy 49 percent of Qingdao Cable TV Network Ltd.

- William Brent



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The renaissance of new digital services now on trial in Japan could change the business for everyone. But it's coming with some serious growing pains.

eep in the heart of Tokyo is a house that provides a portal to the year 2003. The residence goes by the name of HII House, although it's more informally known as Hill House. And it is Matsushita Electric Industrial Co.'s vision of the fully wired home as it will appear a mere four years from now. In the living room, a 50-inch plasma display allows viewers to toggle between cable TV, direct-to-home platforms or terrestrial signals. The home server can be accessed from any TV or monitor in the house and can move back and forth between stored and live broadcasts.

In the den, a so-called multi-point video communicator allows users to catch up with acquaintances around the globe. And distance-learning is easy thanks to a hybrid Internet/digital-video disc system for quick retrieval of large amounts of data and interactive exchanges.

Swing by the kitchen and you'll find an "interactive-communication refrigerator" that allows you to keep track of what food is on hand by simply barking out a question or touching a panel. You can even check in with the refrigerator while you're at the supermar-

ket to find out if you have any *wasabi* on hand. Just give the fridge a call with your multimedia cell phone. The microwave oven is also remotely programmable with recipes downloaded from the Internet or the home server.

Feeling a little under the weather? Well, a 42-inch flat-panel TV in the bedroom is connected to electronic health-monitoring sensors, and they can check body temperature, blood-pressure, heart rhythm and blood-sugar levels.

Needless to say, all of these products are an indication of the renaissance in electronic wizardry that is occurring not only at Matsushita — which puts out the Panasonic, National and Technics brands — but among all of Japan's technology companies. They're shaping the television and telecommunications industries not just in that country, but over the entire world.

Hill House is the tip of the iceberg, when it comes to the dramatic change that's in store for Japan, the world's second largest economy. While some of the impending alterations are causing anxiety among pay TV

players, there's also plenty excitement ahead.

Miranda Curtis, president of Liberty Media International Inc., describes the whole country as a "great sleeper." Liberty has investments in a cable and telephony systems operator there, Jupiter Telecommunications Co., as well as in a network group, Jupiter Programming Co. Ltd. Both are joint ventures with Sumitomo Corp.

Other words of optimism come from Yasushige Nishimura, who has a triò of titles — chairman of Jupiter Programming, executive adviser to Liberty Media, and chairman of the Satellite Broadcasting Association trade group. "The next five years will be full of opportunities. E-commerce will be tremendous," he says

Part of the promise for companies like Jupiter is the government's decision to completely abolish regulations that had previously limited foreign ownership of cable and telephony systems to 20 percent. In fact, the Economic Planning Agency, a government organization, has determined that opening up the telecommunications business to new players in general could



Regulators have also streamlined the procedure for obtaining permission to build new cable-TV transmission facilities. They've forced monolithic telco Nippon Telegraph and Telephone Corp. (NTT) to open its national wired infrastructure to the cable industry. And they're now allowing programmers to multiplex their channels.

In fact, the programming industry is on the verge of either a gigantic explosion or a beautiful blossoming, depending on whose view is taken. Seven of the country's designated broadcasting-satellite (BS) programmers — largely composed of the terrestrial networks — have been given a license to create either one high-definition channel each, or three digital channels. That means more than 20 new services could be on the way.

While Hill House puts a high-tech-future spin on Japan, a visit to Tokyo's Minato district provides some clues about the prolific nature of the programming business these days. There, three of the country's "Big Five" broadcasters are hard at work building brand new facilities.

Nippon Television Corp. (NTV) is putting up two high rises — one 39 stories tall, the other 34 stories tall — that will include not only the network's offices and studios, but also an office tower, retail shops and a hotel.

TV Asahi's new facilities are slated to open in 2003, but it has already outfitted its latest complex with digital studios and transmission facilities at a cost of 150 billion yen (\$US1.4 billion). TV Tokyo is also constructing new digital facilities with the latest and greatest digital equipment available.

NHK, Japan's public broadcaster and the official champion of digital broadcasting, has already invested some 300 billion yen (\$US2.8 billion) in its showcase digital center. In so doing, it's attracted a stream of visitors from the United States and Europe interested in seeing digital TV done the Japanese way.

The terrestrials are eyeing two government-imposed deadlines: By December 2000, they must begin digital-satellite transmissions. And in 2003, digital-terrestrial TV (DTT) transmissions will debut in three markets: Tokyo, Osaka and Nagoya. The Japanese broadcasters aren't using DTT for subscription-TV platforms that will compete with cable and DTH, as is the case in Britain. Instead, they will create new digital channels for the others to carry.

All those new services may sound exhilarating. But their impending launches are causing a fair amount of consternation among the cable and direct-to-home platforms that must find the technical and economic means to carry them. And the broadcasters have voiced plenty of concern about how to make the financials work.

Clearly, the Japanese government thought it was de-

vising a rollout plan that would help revive the country's economy. Back in June 1998, when the government announced an acceleration of the DTT rollout to the year 2000, it released a study that estimated the combined investment in infrastructure, equipment and services for DTT would reach 76 trillion yen (\$US725 billion). What's more, the sector was expected to create more than 700,000 new jobs over a 10-year period.

But through a confluence of events, both technology- and costrelated, the Ministry of Post & Telecommunication's (MPT) digital-terrestrial game plan has been mired in trouble.

For the past two years, stories have circulated concerning the commercial broadcasters' difficulties in making the transition to DTT.

These problems have ranged from station-allocation-number issues to the threat that 54,000 people would be put out of work if the MPT insisted that broadcasters meet their target date. Some claimed the cost of transforming the networks into DTT enterprises could reach several trillion yen per broadcaster.

"If Fuji changes to digital broadcasting, we will have to set up 1,040 relay stations and spend 90 billion yen [\$US860 million] on our local stations," says Masakuni Sawano, the supervising director in the corporate planning department of Fuji Television Network Inc.'s news division. "That's equal to eating up 20 years of profits [for the stations] to move to digital." It should be noted that the Big Five receive roughly 70 percent of their ad revenues from Tokyo, Osaka and Nagoya — the three markets were DTT will initially debut.

Comments like those finally struck the right note: Technical issues won out as commercial broadcasters made a concerted effort to gain more time to replace their analog-based networks with DTT transceivers. Tests determined that 12 million people around Japan would be physically incapable of receiving digital-terrestrial signals.

The compromise solution now in place allows the terrestrials to debut digital in the skies, via satellite, rather than on the ground. The terrestrial-TV stations — along with some of the satellite-delivered channels such as NHK, WOWOW and Star movie channel — will start digital transmissions in 2000 as planned, but from BS-4b, an unused, NHK-owned digital bird.

Datacasters now want to join the digital party, although there is not much concern since the same groups own the current data networks that transmit via terrestrial frequencies.

One new channel has been set up by the trio of business newspaper publisher Nihon Keizai Shimbun Inc. (better known as Nikkei), news agency Jiji Press Ltd., and the gigantic ad agency Dentsu Co. Ltd. Nikkei is no stranger to the satellite-TV business; it's already joint ventured in the Nikkei CNBC business-news channel. A separate datacasting service has also been set up by Hitachi Ltd. and a group of 40 other partners.

While the broadcasters have received a bit of a reprieve, it won't last for long. The MPT says that by 2003, they must begin digital-terrestrial transmissions in the three major markets originally slated for 2000. A nationwide rollout must occur by 2010.

Although the timetable has improved, it still poses big problems for



Japan at a Glance

	1997	1999	2001	2003	2005
Total households	45.1	46.7	47.6	48.5	49.3
Cable homes	1.8	2.7	4.2	6.3	8.0
DTH homes	0.4	1.6	3.2	4.7	6.2

NOTE: All figures in millions SOURCE: Jupiter Telecommunications

the cable operators and DTH platforms. While the country's two DTH platforms are digital, and large cable operators are in the process of converting to digital, they must make major technical adjustments that will enable them to transmit the new DTT signals. What's more, they all will need to supply consumers with new set-top boxes, and nobody's happy about it.

Titus Communications Corp., a multiple system operator (MSO) owned by MediaOne International, Toshiba Corp. and Itochu Corp., began "live testing" of the digital transmissions last month and will continue to do so through March, according to Yoichi Hiraoka, general manager of Titus'

corporate-planning office.

Hiraoka explains that once testing is completed, Titus will "narrow down the specs for a digital set-top box to be newly developed by the end of 2000. But that's an optimistic scenario." Those boxes will need to handle not only digital-video signals, but data and audio signals as well. "Terrestrial digital in 2003 will again have a different modulation, so it is difficult to determine what to do," Hiraoka adds.

Nishimura reports that Jupiter Telecommunications is also conducting tests to ensure 2000 compliance. The MSO plans to introduce one set-top box capable of transmitting signals from both the BS satellite that the new digital channels are using, and the CS 110-degree East orbital slot from which WOWOW and NHK transmit their established satellite channels.

Jupiter is also well into the process of converting its systems from 450 MHz coax to hybrid fiber-coax (HFC), a move that will prime it for action when the BS-4b satellite begins transmitting the digital signals. So far, 2.2 million out of the 3.5 million households Jupiter passes have access to HFC.

The MPT wants the industry to supply digital set-top boxes with an open standard in retail stores. NHK wants the cable companies to hurry up and deploy digital. An MPT council is attempting to coordinate the cable industry's move into the realm of digital. The

largest systems, such as Jupiter and Titus, appear ready and willing to do so. But Japan has hundreds of small systems operators, and many don't have the financial wherewithal to make the upgrade.

Part of the problem may be solved when TV-set manufacturers start releasing models that will include the functions of set-top boxes. The industry is now working to ensure that there is an open system that will allow all boxes or TV sets — to accept one conditional-access system, with one card for the pay-per-view channels that the broadcasters are expected to provide and the premium channels WOWOW and Star. The smart card will also be used for transactional services. A meeting of minds on that front is expected in the first quarter next year.

"The number one question is: How soon will BS-digital materialize in the market?" opines Masakazu Namiki, public relations director of DTH platform SkyPerfecTV. Referring to the cost involved in transmitting all those new channels, he adds, "Everybody will have to decide how much to invest in digital services. And will the cost be passed to subscribers? It's not easy for us" to pay for new set-top boxes.

"The issue is whether it is fair to charge subscribers for yet another tuner," adds Masahiro Hirao, senior manager of corporate communications at DirecTV Japan, SkyPerfect's DTH rival. "We'll probably provide new tuners for free to our subscribers. One idea is to provide an all-in-one CS-BS digital tuner."

Needless to say, the electronics industry has everything to gain on the tuner front. What's more, the Japan Electronics Industry Association projects that by next June, 10,000 high-definition sets with built-in tuners will be sold per day. Multiply that by three years, and Continued on Page 40

What do all Top Chinese Media Executives Read?

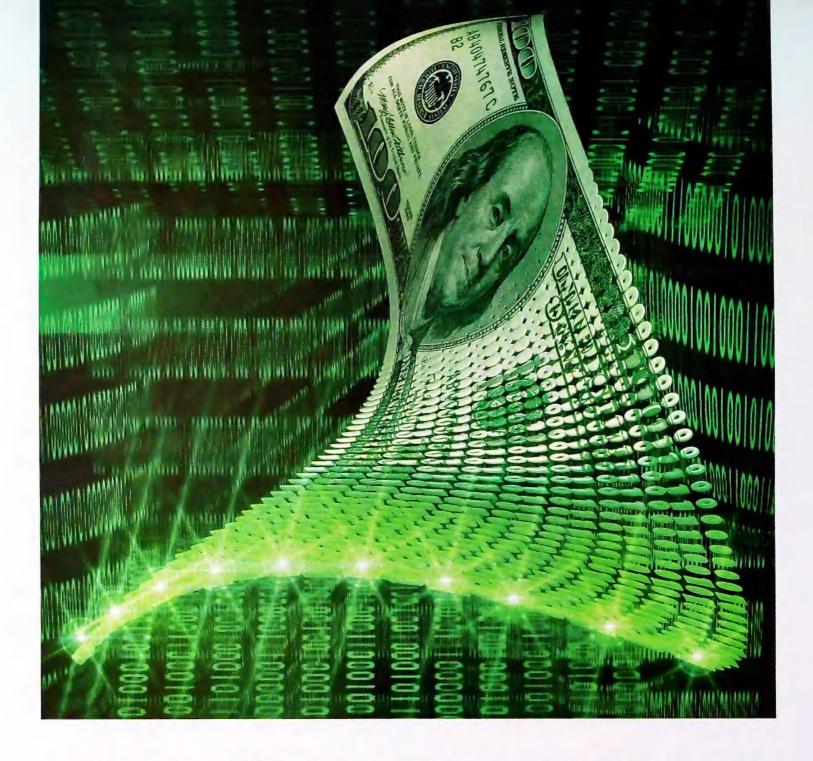
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Righting the

Mark Ship

After years of strategic zigzagging, the Brazilian cable company appears to have found a new purpose and direction.

By Jo Dallas

NYONE WHO HAS FOLLOWED THE HISTORY OF TVA, one of Brazil's leading cable companies, will tell you that it has undergone so many changes that it at times seemed like a ship buffeted about on the high seas, altering its course and changing captains — sometimes with alarming frequency. A new captain from TVA's parent company, publishing giant Grupo Abril, came aboard a little more than a year ago, and by all appearances, he has done a thorough job of lashing the corporate rigging to a much firmer mast.

That captain is José Augusto Pinto Moreira, who serves as TVA's president in addition to his duties as vice chairman of Abril. The course upon which he has set the company involves a focus on cable and wireless distribution rather than on direct-to-home (DTH) satellite TV, a business TVA chose to exit earlier this year when it sold its stake in the Brazilian arm of Galaxy Latin America's (GLA) DirecTV service.

Moreira's trajectory is bent on selling the company's assets in program networks. And TVA is searching for new allies, an effort made all the more urgent because of the long-held desire of its four U.S. investors to exit the company.

With all that shedding in the works, it's obvious that TVA intends to concentrate on its business as a multiple system operator (MSO). TVA "has positioned itself as a distribution company," says Moreira.

He intends to pump up TVA's systems with a gambit of new services in voice, video and data transmission. The most high-profile of those right now is its new high-speed Internet service known as @jato, which was very much in evidence this October at ABTA, the annual Brazilian cable convention.

But whatever video services are added, they're not likely to involve new investments in channels. TVA recently sold its 50 percent stake in ESPN Brasil back to partner ESPN International. Next on the block is its 25 percent stake in movie service HBO Brasil and its Eurocentric network, Eurochannel, which it wholly owns. The fate of MTV Brasil, in which Abril itself holds a 50 percent interest, is un-

clear, though the company hasn't stated any desire to exit the venture.

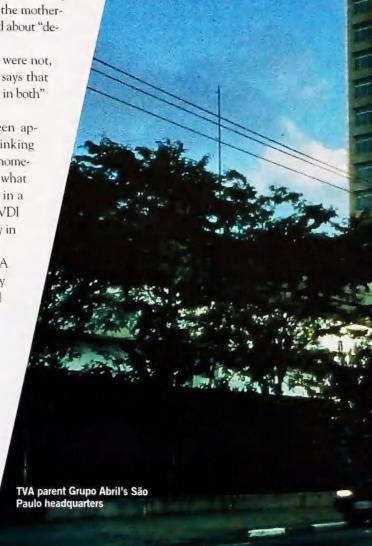
Selling the program assets might appear to be something of a 180-degree turnaround. After all, it was only a year ago that the most senior captain on the mothership, Abril president Roberto Civita, talked about "developing content for multichannel usage."

The desire was there, but the resources were not, explains TVA director Leila Loria, who says that "Abril just didn't have the money to invest in both" programming and distribution.

Generally, TVA's new vision has been applauded. "[TVA] spent a lot of time rethinking what to do. They went away and did their homework, and were mature enough to realize what they had to do and are coming up again in a good way," says José Frauendorf, director of VDI Rede de Inteligencia, a pay TV consultancy in São Paulo.

That is praise indeed from the former TVA operations director for Brazil, who, like many others in the industry, recalls less settled times. Certainly, one landmark change that caused upheaval was the arrival in the mid-1990s of four U.S. investors: Falcon International Communications, ABC Inc., Hearst Corp. and Chase Manhattan International Finance Ltd. Combined, they own 38 percent of TVA.

It's largely believed that TVA's focus on hardwire cable at that time was largely due to the influence of one U.S. investor in particular, Falcon. But while that strategic di-





rection made a lot of sense to many in the business, the overall relationship between the U.S. investors and the Brazilian company has been a bumpy one. Not only was there a clash of corporate cultures, but, at times, there was such a rapid-fire succession of lieutenants that TVA never seemed able to steer one steady course. Over a period of three years, the company had five CEOs.

During that time, TVA's main rival in cable, Globo Cabo S.A., was able to match TVA's subscriber base and then pass it. Today, Globo Cabo controls some two-thirds of the country's subscriber universe.

The troubles continued. There was widely reported friction between the cable and DTH camps of TVA. While that kind of sibling rivalry has been seen elsewhere in Latin America where cable companies have invested in DTH, it seemed particularly acute at TVA.

According to industry insiders, the U.S. investors — notably Falcon — did little to nourish the fledgling DTH business. Falcon executives were not available for comment. But Loria, DirecTV's former director general, does not hide the fact that there was friction between the two pay TV divisions. "DirecTV really competed with TVA," she says.

Loria explains that DirecTV and the cable business weren't entirely joined at the hip; that was only so in the finance, legal and human resources departments. But oftentimes DirecTV was handicapped in what it could do because of the perception it might negatively impact the cable-systems business, according to sources.

It's not surprising, then, that TVA decided to sell its interest in DirecTV to GLA's majority partner, Hughes Electronics Corp., and use the money to concentrate on developing and expanding its own existing

cable structure. "The best decision was to step out of this [DTH] investment and recapitalize TVA," says Moreira. "TVA is now well capitalized, and we are able to start a clear process of development."

Ray Joslin, president of Hearst Entertainment & Syndication and vice president of Hearst Corp., is the last to deny that TVA has faced some tough challenges over the years. But, above all, he emphasizes the difficulties sparked by the international financial turmoil that began to shake Brazil in 1998. "TVA is a capital-intensive company that got caught in the middle of an economic crisis," says Joslin.

To underscore the extent of those difficulties, TVA was roughly \$US200 million in debt on a free cash-flow basis in both 1997 and 1998, according to Bruce Stanforth, head of Latin American corporate research at BNP Capital Markets L.L.C. Around that time, TVA "tried to hit about three or four different technologies, and that exacerbated the problem," Stanforth says. "They tried to find capital expenditure for all of them." But when the economic crisis hit, "they missed their growth projections. And the capital markets closed, and it was downhill from there," he adds.

Joslin believes that TVA's recent maneuvering has put the company on a much firmer foundation. "Through financial reengineering, [TVA] has made the balance sheet a lot healthier. GLA has been sold, so we were able to refine our debt. The ESPN Brasil deal has been done; the HBO deal is close to being done. So we are now able to focus on the guts of the business," he says, referring to the cable operations.

More impartial commentators have also welcomed TVA's new direction. TVA is "more focused. They tried to do everything, but it's clear they couldn't do everything," says Stanforth. Though he adds that such streamlining was also to some extent forced upon the company by Abril, which was unwilling — and probably unable — to keep pumping in money. "Abril's not going to give them an open [financing] tap, even if they wanted to," he says.

It's not that there are a shortage of challenges up ahead for TVA. One that has been simmering on the back burner is the position of TVA's four foreign partners. More than a year ago, they clearly signaled their desire to get out of the company.

Moreira says that TVA even hired investment bank Continued on Page 40

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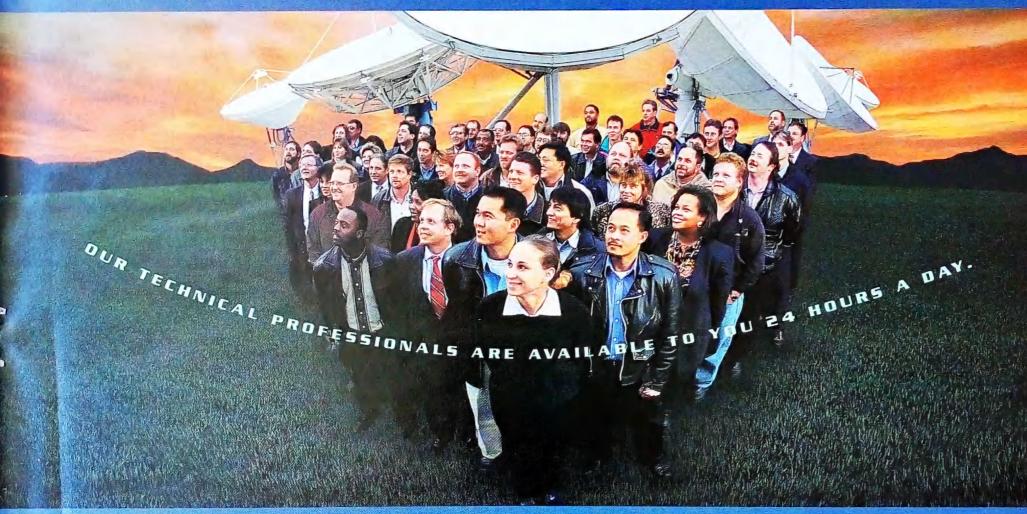
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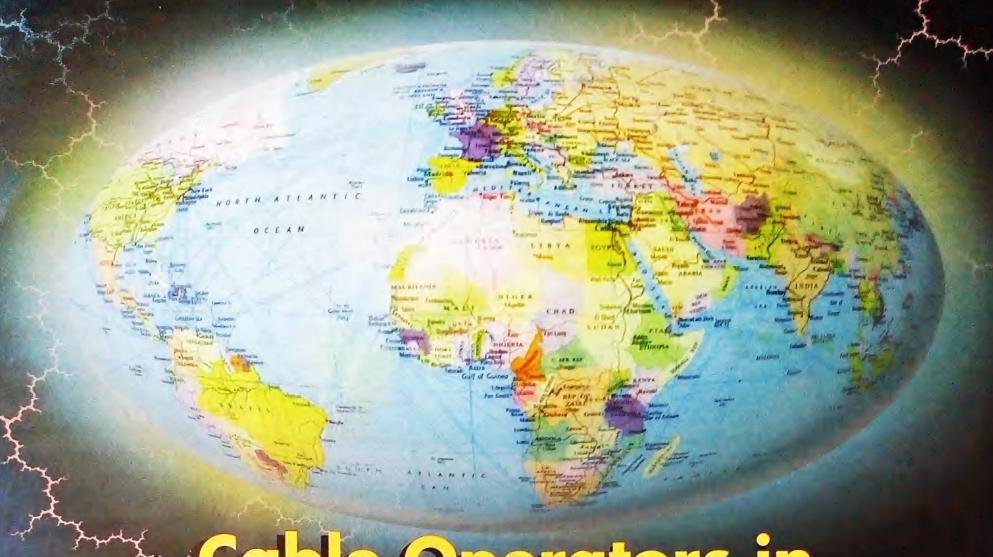
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Untangling China

ith a population of 1.2 billion and 350 million televisions — and 80 million cable-TV homes — China is considered by many to be a vast but largely untapped cable-TV frontier.

After a long history of protectionist politics designed by the government to maintain control over the flow of information to the populace, China slowly, but quite surely, is taking impressive steps to modernize its communications infrastructure. That's according to several speakers at China Telecom 2000, a conference organized by Information Gatekeepers Inc. last month in San Francisco.

Quietly, China has built an impressive digital fiber optic telecommunications network that supports 135 million telephone lines, making the grid the second-largest network in the world. A national backbone of eight "horizontal" and eight "vertical" routes — consisting of more than 1 million kilometers (620,000 miles) of fiber — crisscross the country. There are 25 million mobile-telephone subscribers in China, and another 10 million to 15 million are expected in the next few years.

Trials and limited rollouts of technologies including Internet-protocol telephony; high-speed Internet access; asynchronous-transfer-mode networks; and dense wavelength-division multiplexing are planned or underway.

With China's demographics, as well as the United States' approval of its entry into the World Trade Organization, observers note that telecom companies stand a real chance of benefiting from trade reform with China.

Traditional cable-TV companies in China also hope to reap the benefits of relaxed regulation and technological innovation. Earlier this year, China's State Administration of Radio, Film and Television (SARFT) announced plans to establish a "broadband information network" that would use the country's existing cable-TV infrastructure. The goal of the initiative is to put cable's broadband network to full use. "Cable TV should be the chief choice for the Chinese information industry," says Zhang Haitao, the SARFT's vice minister. Plans call for the development of a common interconnection standard between cable networks, along with a set-top box standard and uniform construction specifications.

What's more, the Chinese government has granted telecomservice licenses to newcomers such as China Unicom, in an effort to break monopoly thinking and lower the cost of telecom services. The companies could also play a huge role in giving Chinese citizens access to the Internet. Observers note that with the number of televisions far outpacing the number of PCs (only about 2 percent of China's population has a home computer), it is the perfect display device for those who want to surf the Web.

China has been a complex and confusing market, especially for foreign investors. Recent events may help unlock the region — and cable-TV companies could be among the big winners.





Telstra Builds a New Network for a New Age

DMO Is the M.O. at Australia's Incumbent Telco

BY JAMES CARELESS

s Australia's incumbent and still-dominant telco, Telstra Corporation Ltd. is anxious to stay ahead of competitors Cable & Wireless Optus Ltd. and Vodafone Pty. Ltd. That's why Telstra has opted to integrate its diverse transmission systems into a single network, with Internet protocol (IP) as its language.

That's no mean feat, considering that Telstra's fiber optic and copper lines reach virtually all Australians.

Moreover, this telco isn't just a phone company. It has also invested in cable television and high-speed Internet access. To provide Web access, it uses both hybrid fiber-coax (HFC) and



twisted-pair digital-subscriber-line (DSL) technology. At the same time, Telstra offers wireless-telephony service and even satellite communications in Australia.

For Telstra's users, all this di-

versity is a boon. But from an operational standpoint, it can be a nightmare. Add to this the company's declining local and long-distance revenues — the natural

Continued on Page 29

Outsourcing Becomes the 'In' Thing

BY HANK HOGAN

whith the new millennium approaching, network providers are facing increasingly fierce competition. Multiple system operators (MSOs) are upgrading their networks to offer advanced services such as high-speed data, telephony and on-demand digital video, and they're under pressure to limit downtime by making their systems more robust and reliable.

That has created a real boon for companies that specialize in network monitoring and control, a concept known as "network outsourcing." Recent agreements between third-party companies and network operators seem to indicate that more than cable modems and the like are needed in the brave new world of broadband. The network, and all the opera-



tions-support services it requires, also have to be in place.

Ted Henderson, managing director of research at Janco Partners Inc., an investment banking firm that specializes in telecommunications, says that the needs of operators lie behind much of this deluge of outsourcing agreements. Because of the high stock valuation given to broadband services, there is a strong market incentive for rapid, efficient and aggressive deployment of new services. Henderson notes the need and timetable frequently lead operators to one solution.

"In a lot of cases, they're going to outsource monitoring and controlling of the network just from a resource standpoint," he says.

"There is a need for someone you can outsource that work to, who has already made the capitalization investment and the infrastructure investment," adds Ray Bennett, product director of broadband-management services at C-Cor.net Corp., which provides products and services to hybrid fiber-coaxial (HFC) cable networks.

C-Cor.net recently announced it will supply South Korea's

Continued on Page 36





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Standards, Technology Take Stage at ECC Convention

Cisco Joins DVB-DAVIC Consortium, While Microsoft Discusses Broadband Strategy

BY ROGER BROWN

The battle between competing cable-modem technologies in Europe made news during October's European Cable Communications convention in London.

From a technology perspective, the confab became the venue where the DVB-DAVIC Interoperability Consortium gained a new member and took another step forward. At the same time, the EuroDOCSIS movement made new headway; Microsoft Corp. explained its broadband strategy; and a number of new products made their debuts.

The DVB-DAVIC (Digital-Video Broadcasting-Digital Audio-Visual Council) group, which was formed at the ECC show in 1998, got a shot in the arm when data-networking powerhouse Cisco Systems Inc. became a member of the group, pledging to support the standard. Cisco's interest in the group has become more intense after its September acquisi-

tion of Cocom A/S, a Denmarkbased developer of high-speed Internet-access systems designed for use over cable, satellite and wireless networks.

"Cisco will fully support and promote the DVB-DAVIC standards, the industry and volume deployment of DVB-DAVIC cabledata systems," Carson Chen, vice president of technology and development engineering at Cisco's cable business unit, said in statement unveiling the purchase.

Members of the group now include Alcatel S.A. of France; Comatlas S.A, a French subsidiary of U.S.-based VSLI Technology Inc.; Combox Ltd.; Divicom Inc.; Hughes Network Systems; The Industree B.V.; Nokia Multimeda Terminals; Pace Micro Technology plc; Philips Electronics N.V.; Sagem; Thomson Broadcast Systems and Thomson Multimedia.

DVB has already presented a complete set of standards defining the OSI layers related to the provision of interactive services on cable and wireless networks to the



British MSO NTL, above, is a proponent of EuroDOCSIS.

European Telecommunications Standards Institute (ETSI). ETS 300 802 defines network-independent layers for both media, while ETS 300 800 and EN 301 199 define the network-dependent layers for hybrid fiber-coax and wireless networks, respectively. The downstream physical layer is defined in ETS 300 429 for cable, and ETS 300 421 for wireless.

The DVB/DAVIC Interoperability Consortium came together to develop DVB-RCCL, an ex-

tension that allows applications to run over the return channels on cable and wireless networks. DAVIC recently adopted ETS 300 800 as the only standard for cable-modem applications, a move observers consider a major step toward the production of common specifications between DVB and DAVIC. "Previously, it was practical only to match set-top boxes with cable headends of the same manufacturer," notes Pekka Kuusela, vice president of sales at

Nokia Multimedia Terminals. "Now, our set-top boxes will work with all leading cable headends."

Meanwhile, proponents of the competing EuroDOCSIS standard have been pushing for an interoperability and verification-testing process for cable modems and the headend-based cable-modem termination system (CMTS). During ECC, the Telecom over Cable Operator Forum (TOCOF) announced it had selected the Department of Information Technology at Belgium's University of Ghent to begin testing EuroDOCSIS devices for interoperability by March 1, 2000.

Originally, Broadcom Corp., a manufacturer of integrated circuits for cable modems, had agreed to set up an interoperability lab in The Netherlands. The company has agreed to support the TOCOF approach in order to keep the process unbiased. The TOCOF consists of European cable operators Lyonnaise Cable, Net-Cologne, NTL Inc., Telenet Continued on Page 38

Around The World

INTIN AMERICA

Newbridge Networks Corp. announced that Rey Moreno S.A. has selected its broadband-wireless system for Colombia's first local multipoint distribution service (LMDS) network. Rey Moreno is a Colombian telecommunications-service provider associated with Telefónica Data.

Initially deployed in Bogotá, the network will expand to include four of Colombia's largest cities: Medellín, Cali, Barranquilla and Bucaramanga.

The Newbridge LMDS system will enable Rey Moreno to deliver a broad range of voice and data services to its customers using a high capacity, statistically multiplexed, point-to-multipoint distribution system for maximum spectral efficiency.

Radio Formula in Mexico has ordered more than \$US900,000 worth of digital-video equipment from Wegener Corp. to transmit Teleformula, a new cable-video service.

The orders consist of digital integrated receiver-decoders, network control, an encryption system and DiviCom Inc. MediaView digital encoders. A transportable transmit system is included to send remote programs to the central site.

This equipment will be used to receive two channels of video in locations throughout Mexico from Radio Formula's facility in Mexico City.

EUROPE

Proxima Systems Ltd. said 022 Telegeneve, a Genevabased cable TV operator, has installed its billing and customer-management system.

Telegeneve uses the "Pro-Cable" system to manage subscribers of its new digital service, called Digicable. In operation since June, Digicable enables users to receive more than 100 television and radio channels, as well as an electronic program guide.

022 Telegeneve's 550 MHz network covers more than 350 kilometers and serves more than 130,000 subscribers.

Viaccess S.A. announced that its conditional-access system is compliant with the Digital Video Broadcasting Simulcrypt specification, making it the first company to reach the milestone.

The Simulcrypt method allows several conditionalaccess systems to control the same program, giving cable operators the choice of several headend equipment manufacturers to use.

To generate a Simulcrypt-compliant transport stream, the headend must connect the devices for inserting and synchronizing entitlement-control messages and for inserting entitlement-management messages from all the conditional-access providers.

Spanish cable operator MENTA will conduct a three-

month field trial of Scientific-Atlanta Inc.'s Explorer 2000 digital-interactive set-top boxes over the company's digital network. This is the first interactive digital-network trial in Spain and the first digital set-top trial for S-A in Europe.

In addition to set-tops, S-A will provide headend components and technical support to deliver interactive services over cable using its Internet-protocol-based, realtime, digital reverse-path technology.

ASIA-PACIFIC

NTT CommunicationWare (NTT ComWare) will license software from The Fantastic Corp. to support NTT's rollout of satellite-based, broadband-multimedia services in Japan.

Fantastic's Channel Management Center software will be combined with NTT Satellite Communication's MegaWave Pro satellite service to leverage the Internet-protocol and Digital-Video Broadcasting open standards to allow any form of digital content to be broadcast to computers, televisions and third-generation mobile devices. Fantastic's software enables customers to aggregate, broadcast and consume multimedia content using networks such as cable, satellite, digital-subscriber line and digital terrestrial. Customers can book, track and subscribe to broadband services, and pay on a per-transaction basis.

BROADBAND INTERNATIONAL

Telstra,

Continued from Page 25 result of competition, which started in 1992 — and one can understand why Telstra decided to look for an integrated solution.

The name of that solution is DMO — short for Data Mode of Operation, the title of a study that took a sweeping look at all of Telstra's operations and products.

The study's conclusion was simple and breathtaking: In this digital age, everything is becoming data-driven. Hence, it makes sense to make data the heart of all networks, specifically using IP, which the Internet is rapidly turning into a de facto world communications standard.

Telstra has chosen to embrace the DMO's conclusions. In doing so, its goal is to "position Telstra as a major online player in an online world," says Greg Fidler, Telstra's DMO project director. "We believe that, over time, every service that Telstra provides will migrate across to an IP network."

THE MONEY FACTOR

As a result, Telstra has decided to invest \$US267 million in a DMO-driven network upgrade as part of a \$US1.3 billion improvement of the telco's entire infrastructure. Essentially, the company is going to make all of its systems not only run on IP, but converse easily with each other on this standard, as well. According to Fidler, this isn't as big a leap as it may sound. That's because Telstra is already "a major provider of data and IP-based services, and we're an [Internet-service provider] in our own right," he

By moving to IP, Telstra hopes each customer will have a single IP "port" at his home or business. This port will seamlessly connect all devices to the outside world, including telephones, cable TV, computers or anything else. In other words, Telstra is aiming to provide them with ultimate connectivity through a single outlet.

Meanwhile, Telstra's IP architecture will allow all these services to travel on a single high-speed backbone.

To make this happen, the telco intends to install multiple STM-1/OC-3 SDH fully-redundant trunking rings running at 155 Mbps. These will feed the backbone, which will operate at OC-12/622 Mbps.

TECHNOLOGY MIX

Functionally, Telstra's DMO backbone will be a mix of technologies "We believe that, over time, every service that Telstra provides will migrate across to an IP network."

- Greg Fidler, DMO project director, Telstra Corporation Ltd.

that include circuit-switched, HFC, asynchronous-transfer mode (ATM), frame relay, DSL, satellite, and wireless-transmission systems.

To make it work as one — as far as customers are concerned — Telstra will use "access servers" to automatically route each customer

transmission to the right network; to wireless for wireless calls, for example, or to DSL for Internet access. Given the enormity of implementing the DMO, Telstra's been very careful about picking its equipment vendors.

The heart of the DMO network is being provided by Nortel Networks Corp. It's delivering the IP, ATM, and frame-relay data network architectures, plus the access Continued on Page 30



BROADBAND INTERNATIONAL

Telstra.

Continued from Page 29 servers and the necessary systems integration. Telstra contracted Nortel to build a national code division multiple access (CDMA) wireless network.

"We found that the technology and the support that Nortel were offering were what we were looking for in a core network supplier," says Fidler. "Nortel are already our ATM and frame-relay supplier, and we have an extensive ATM/frame relay that's based on their technologies. To turn to them for IP capability was a natural extension."

Meanwhile, Lucent Technologies Inc. will provide Telstra with

Internet and signaling system 7 (SS7) network gateways, while Cisco Systems Inc. will deliver voice-over-IP equipment.

The overall DMO network integration will be performed by Alcatel Network Systems. Operationally, Telstra expects DMO-style services to start reaching customers within a year,

thanks to the amount of compatible equipment already installed in its existing networks.

However, the current effort is only the first stage of integration, according to Fidler. Over time, there will be more DMO implementations, as Telstra's networks and customer demands grow.

"It's not a project which says

'Here we are in day one, and 365 days from now we have to have gone all around Australia and transformed things," he explains. "It's a continual capacity upgrade."

MAKING ADVANCES

Of course, network-upgrade projects usually sound great in theory. But how well will Telstra do in making DMO work? Probably quite well, if the company's past performance is anything to go on. Case in point: Susan Welsh di Grimaldo, a senior consultant with The Strategis Group Inc. in Washington, D.C., has spent a great deal of time analyzing Telstra's broadband offerings. Her assessment: Compared to other in-

"Telstra's been one of the more forward-moving in terms of using a wide range of technologies to offer broadband access to customers."

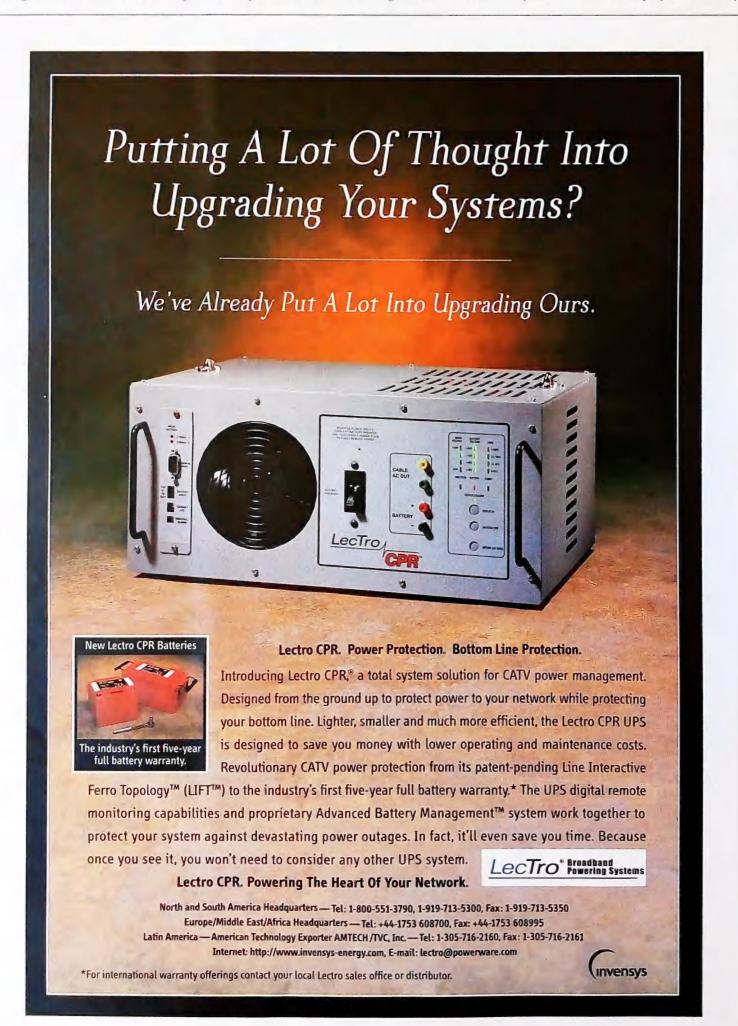
— Susan Welsh di Grimaldo, senior consultant, The Strategis Group Inc.

cumbent telcos around the world, "Telstra's been one of the more forward-moving in terms of using a wide range of technologies to offer broadband access to customers."

On a broader scale, investment bank Morgan Stanley Dean Witter & Co. has also been taking a careful look at Telstra. The firm predicts Telstra's income from data and text services will expand from its 1998 total of \$US1.4 billion, to \$US2.62 billion in 2005. That's an 87 percent increase over seven years. Overall revenue growth is expected to average between 5 percent and 6 percent annually through 2003, according to the analysts at Morgan Stanley.

If all goes as planned, Australia's incumbent telco will end up with an integrated network that is both vastly capable and functionally simple, at least from a standards point of view.

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Cable-TV Vendors Weather Taiwan Quakes

BY JAMES CARELESS

The Sept. 21 earthquake that devastated Taiwan also sent shock waves through the high-tech equipment industry. With the island nation playing such a key role in the semiconductor and component markets — more than half of the world's PC motherboards are made there — people couldn't help but ask if damage from the earthquake wouldn't disrupt equipment supply channels for a long time to come.

For the cable-TV industry, the direct answer is no, but the indirect answer may well be yes.

Why the conflicting information? Generally, cable-TV equipment manufacturers say they rode out the quake and suffered relatively little damage. However, that wasn't the case for computer-chip makers like Taiwan Semiconductor Manufacturing Co. (TSMC) and United Microelectronics Corp., which both had to scrap up to 30 percent of their September wafer production because of earthquake damage, according to market research firm International Data Corp.

One of the worst hit cable-TV equipment manufacturers was General Instrument Corp. The company has two primary set-top box and cable-modem plants, one in Taiwan and another in Mexico. The two factories should produce about 3.3 million digital set-tops this year, according to Dario Santana, GI's vice president of in-



vestor relations. "Four out of five [GI] digital set-top lines are in Taiwan," he adds.

The earthquake hit the GI Taipei plant at 1 a.m. local time, when most workers were at home asleep. As a result, there were no

casualties or injuries on the factory floor. The building itself suffered "some damage that appeared to be primarily cosmetic," Santana says. However, the plant was shut down and evacuated nonetheless, he adds. "We did not allow anyone back into our factory until we were able to assess and establish that it was a safe environment for people to come back to work in."

Once that was done, GI's workers had some cleaning up to do. "We had some equipment that turned over," Santana says. "We had some ceiling tiles that fell, things of that nature." By Sept. 27, the plant was in good enough shape that GI's staff could start realigning the production equipment. Two days later, "we were starting production again," says Santana. "We basically got back to pre-quake levels by Oct. 6."

Beyond making sure its own house was in order, GI also had to reestablish contact with its suppliers. According to Santana, the company has more than 100 vendors in Taiwan. The most affected were some of its chip producers with plants in a Taipei technology park, where power was lost for a number of days. Fortunately, most of them had sufficient chip inventories to keep GI supplied until electricity was restored.

So just how badly did the Taiwan earthquake disrupt GI's production process? "Not much," says Santana. "All said, when you count the partial days we lost when we got started, plus the full days that we lost before we got started, it was about eight days of production that got lost."

This is good news for cable operators, which shouldn't experience any significant delays in receiving set-top boxes and modems from GI. Better yet, GI has enough production capacity to make 4.5 million set-tops a year, well above its 3.3 million goal. This means that the company can

ramp up its production until things are back on schedule, says Santana. "It is unlikely that our customers will feel much of an impact whatsoever in their supply."

Other cable-TV equipment manufacturers appear to be in even better shape. Scientific-Atlanta Inc.'s set-top production hasn't been affected, says Bill Wall, SA's technical director of subscriber networks, because it produces set-top boxes in the U.S. and Mexico.

S-A does get some parts from Taiwan, but it's a relatively minimal amount, says Wall. "None of our suppliers were catastrophically affected. There was a brief shutdown of about a week at one of our suppliers [TSMC] due to power outages," he says. "But ... we've had no impact from the earthquake."

Motorola Inc.'s Taiwanese chippackaging partners did suffer some damage, but none affected the company's cable-TV components, says Motorola spokesman Scott Stevens. The chips that were damaged were meant for "transportation and wireless, which means automobiles [and] cellular phones."

Cable-TV operators didn't suffer too much direct damage from the Taiwanese earthquake. However, they could experience some indirect fallout from its impact on the PC industry.

The bad news is contained in a new report from IDC called *Taiwan's Earthquake: Impact to PC Demand.* According to IDC, the quake knocked out power to 80 percent of Taiwan. This seriously disrupted silicon-wafer production, which had an impact on computer manufacturing. IDC estimates that "at least 15 percent of forecasted PC shipments in [the fourth quarter of this year] will be lost," as a result of "four weeks of lost component and motherboard supply."

The earthquake's biggest impact will be seen in dynamic randomaccess memory (DRAM) and 3-D chip production. According to IDC, the equivalent of 18 million to 20 million 64-megabyte DRAM chips have been lost.

In the end, the Taiwan earthquake should be little more than a ripple for the cable-TV industry. Given the devastation suffered by that Asian nation, this is a very lucky fate indeed, especially with the industry's future so tied to digital technology.



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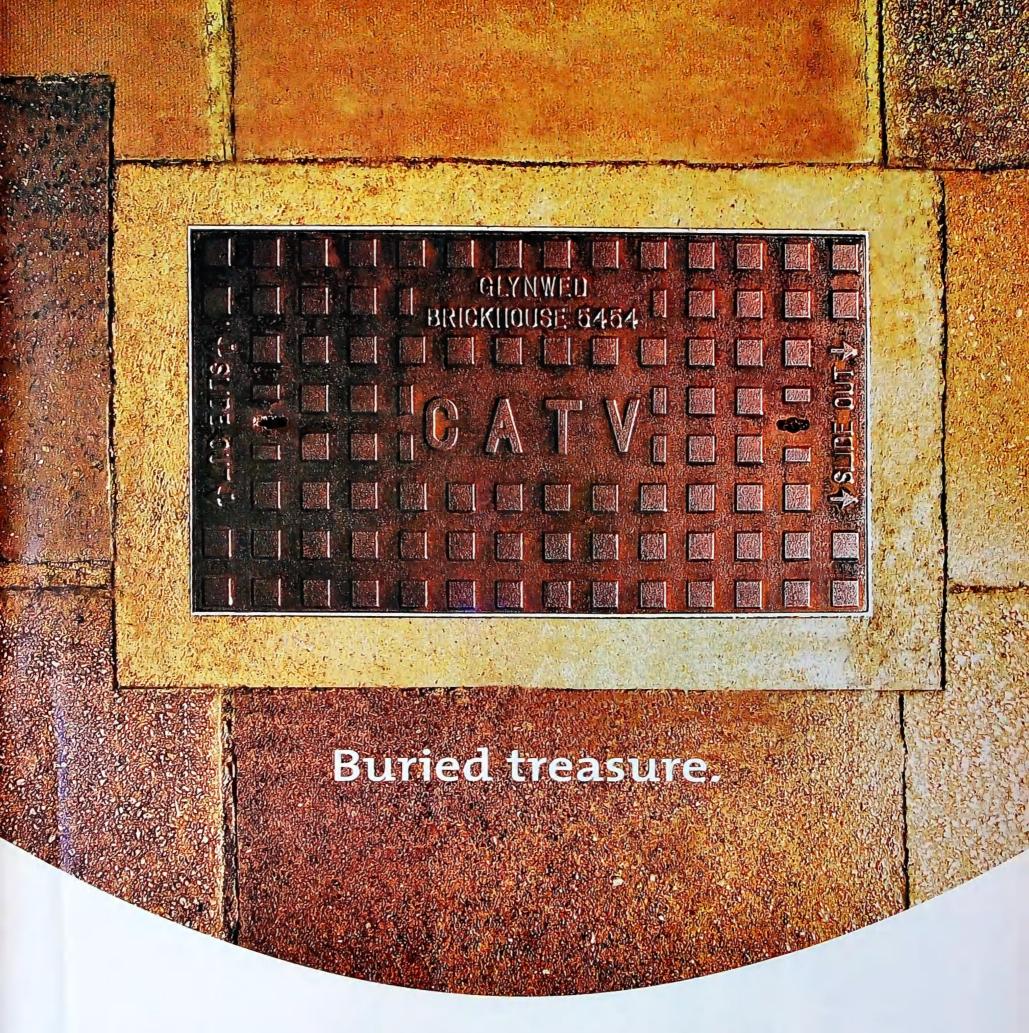
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BROADBAND INTERNATIONAL

Outsourcing,

Continued from Page 25

Kyunggi District cable operator with equipment and management capabilities for a network in the suburbs of Seoul. Tiny Proxima Systems Ltd. of Montreal was selected to supply billing software to the Spanish unit of Electronic Data Systems Corp., which has

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contracts to manage telephony, cable TV, pay-per-view, data-transmission and Internet services. MediaReseaux, a French cable operator owned by United Pan-Europe Communications N.V. (UPC), chose AM Communications Inc. and systems integrator Apsys to manage its network. MSO Irish Multichannel also

joined the party, selecting Convergys Corp. for its operation-support services.

However, not all operators are jumping on board. UPC parent UnitedGlobalCom Inc. licenses billing and support software from outside companies, then does the work in-house, a spokesman says. This approach enables it to cut software development costs, while protecting any proprietary information.

UPC managing director and chief information officer Sue Whitehead notes that outsourcing is more prevalent among cable companies than it is among traditional telephony concerns. But she also says that competitive pressures

may be changing that, and even sees more outsourcing down the road for her own company.

"Our acquisition strategy also creates an attractive opportunity for this, as we simply cannot afford the time or costs to create systems one by one. As a pan-European company, we envision a stronger, more robust strategy moving forward in this area," she says.

In addition to the high stock valuations of cable companies, which put pressure on them to roll out new services at a quicker pace and bring in revenue to justify the share prices, two other factors lie behind the surge in network-support-service outsourcing.

The first is the removal of a fundamental barrier: the lack of bandwidth to carry the signals. "For the longest time, network traffic was an impediment to the capacity to provide that outsourcing," observes Kent McIntosh, director of strategic development at Proxima.

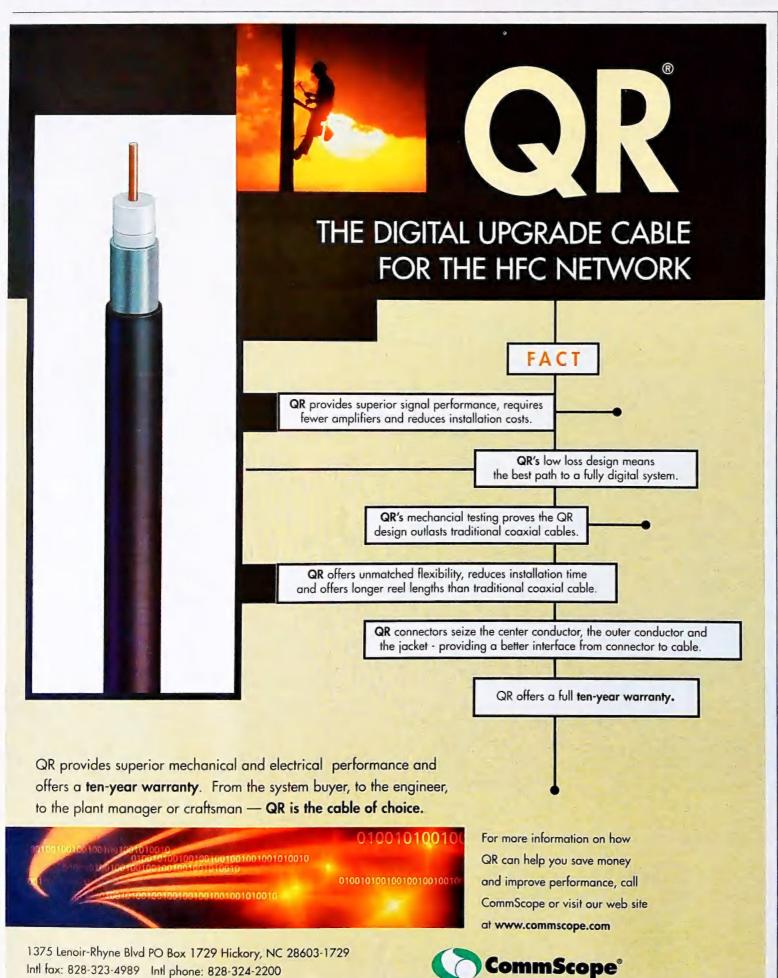
But that has changed with continued improvements in fiber optic technology. According to David Bishop, head of the micromechanics research department at Bell Laboratories, a unit of Lucent Technologies Inc., data-transmission capacity is now doubling every 12 months. That's faster than the 18-month doubling of chip-transistor capacity, and it means there is now sufficient bandwidth to allow remote network control without causing congestion.

The second reason for the growth of outsourcing is subscriber density. On the network side, this manifests itself as low sign-up per return-path leg. In a crowded urban area with high Internet penetration, activating two miles of high quality return path to provide two-way interactivity may attract 5,000 customers. In sparsely populated areas, that same length of return path may net only 20 customers. The fixed costs of the two paths are the same, but the returns are vastly different.

According to Martin Furer, a spokesman for Time Warner Cable's system in Wilmington, N.C., an increasing number of companies are offering network-management services. That's good news for a system like his, which otherwise might not be able to afford two-way upgrades.

"The fact that we need [the return path] and things like that makes this something we would use," he says. The added cost of staff and equipment outstrips any early returns from activating a re-

How Intelligence Travels



turn path in a sparsely populated area. At the same time, the ability to provide high-speed data is critical, so the return path must be present.

"The business model is going to dictate that you don't have a huge investment up front until the service begins to saturate the market and pay for itself," notes C-Cor.net's Bennett.

Recognizing this, C-Cor.net has gone on its own buying spree. Its predecessor, C-Cor Electronics, this year purchased Convergence.com to create C-Cor.net. The deal married a longtime network-hardware company, C-Cor, to a firm that had made significant inroads into the emerging broadband-technology market.

According to Bennett, behind these moves was the realization that hardware alone wouldn't be enough in the new millennium. The company had to provide services.

C-Cor.net invested roughly \$US1 million in a network-operations center in Atlanta. From there, the company manages a broadband network that currently supports 18,000 subscribers in 20 markets. In effect, C-Cor.net acts like an Internet-service provider for MSOs. But unlike others in the same line of business, C-Cor.net does this as a service and eventually expects to relinquish control of the network to the operators.

C-Cor.net plans to build other network operations centers to ensure that if one center fails, service to customers will not be interrupted. The company also aims to expand overseas, although it has no firm timetable.

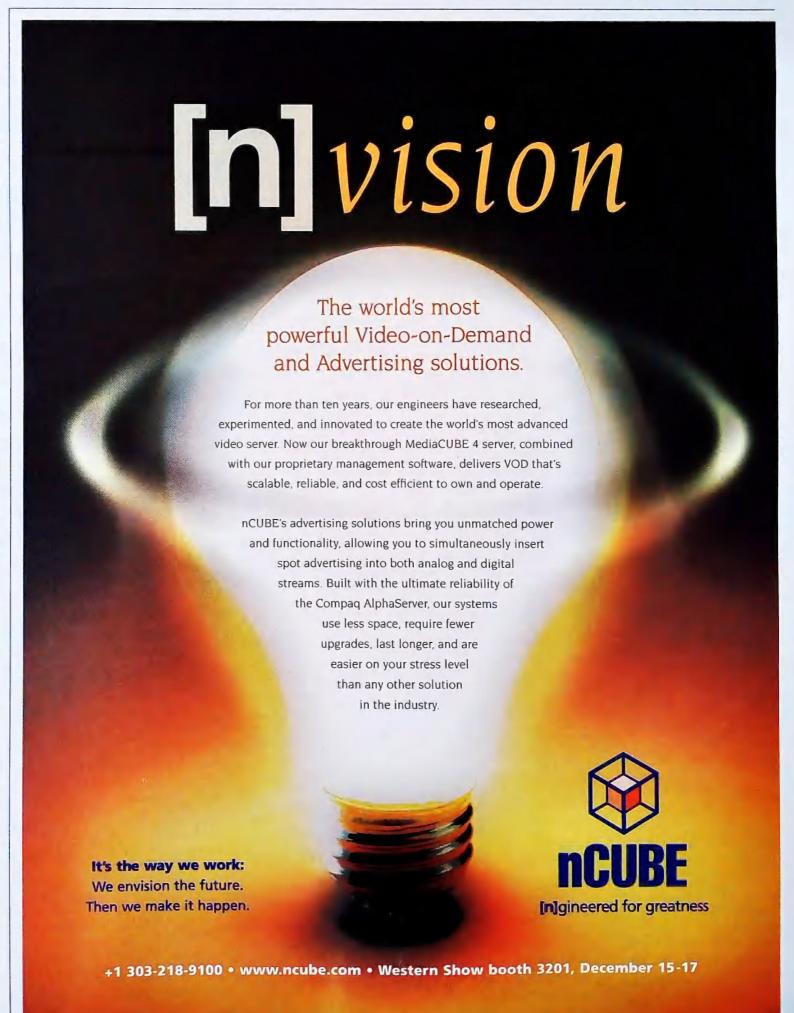
Even if a system has few customers, or if they're spread across a wide area, they will still likely require — and demand — good service and support. For the most part, customer-service representatives handle all interaction with subscribers, including installation requests, billing questions and service-outage complaints. But if there's a problem with customer service, a smoothly running network will be of little value.

That's why some companies, such as Proxima and its network-management partners, are supplying networks with operations-support software. Proxima offers billing software for system operators that provides a full suite of voice, data and video services. Those operators can either purchase the software themselves, or work directly with Proxima to create what are, in effect, service bureaus.

Convergys also offers an all-inone option. "We not only do the customer-care software and the billing software, but we also take care of their field management, workforce management, collections and inventory. On the telephony side, we do all their phone-number inventory as well as the network inventory," says Curt Champion, director of marketing of cable and broadband solutions for Convergys. "For video, we also do the real-time provisioning."

This drive toward one-stop shopping should continue. MSOs want it, and service suppliers continue to invest in software to meet that demand. Janco Partners' Henderson notes that customercare and billing-services firm CSG Systems International Inc. routinely plows 10 percent to 12 percent of its revenues back into software research and development.

Outsourcing could accelerate as deregulation takes hold and new cable companies enter the fray. The technology for outsourcing is in place, and MSOs want to keep their own costs down and leverage investments made by others. Says Bennett: "That allows them to provide high-speed data services without building up the entire complement of personnel that you would need to have for that kind of a service in the first place."



BROADBAND INTERNATIONAL

ECC,

Continued from Page 28

Holding B.V., Telewest Communications plc and Cable & Wireless Communications plc (which has agreed to be bought by NTL). The six represent roughly 20 million homes passed and have a combined 8 million subscribers. As a group, the members expect to deploy 650,000 cable modems by the end of 2000 and 2.3 million modems yearend 2002.

Those kinds of "open" standards and approaches to networking are leading world-class hardware and software vendors to the cable television industry and its broadband delivery platform, according to Thomas Koll, vice president of Microsoft's Network Solutions

Group, the keynote speaker at ECC. Broadband access and technology will transform the Internet into an everyday tool, predicted Koll. It will also convert the television into an interactive device; alter the way people work by creating "virtual offices" that bring together employees from different locations; bridge physical distances between people; and change the way people learn by linking them regardless of their physical location.

"We want to create the same kind of platforms and standards in the telecom industry as in the PC industry, because it will allow more people to deliver more applications and provide more value to consumers and businesses," Koll said in his speech.

Koll specifically addressed the worldwide opportunities that broadband offers by pointing out Microsoft's global interests. "We have a great relationship" with Cable & Wireless HKT of Hong Kong, he said. "We're working actively in Japan, which is a great market that is moving very rapidly into new forms of broadband communication. And I think deregulation has opened up new and interesting opportunities in the European cable market."

In support of those efforts, Com21 Inc. displayed its EuroDOCSIS-compliant modem, which will be tested shortly, according to company officials. 3Com Corp. also said it will sup-

port the standard, and is currently developing a cable modem based on the specification that will be introduced after March 2000.

3Com also demonstrated a DOCSIS-based CMTS that includes a new integrated bandwidth manager that offers Quality of Service features and statistics logging for customer billing. It also boasts EuroDOCSIS upstream and downstream modules, support for DOCSIS 1.1 modems, and an integrated server to support DHCP and TFTP.

While data over cable is recognized as a promising source of ancillary revenue, operators like Telewest and NTL are bullish on digital-video services that company executives claim will redefine

the competitive landscape between cable and direct-to-home satellite. Telewest, which launched digital-video service in October, views the digital set-top box as a gateway to other services, including video-on-demand (VOD), according to CEO Tony Illsley. In fact, the company will begin a VOD test to 20,000 homes next year, he says.

NTL will use its fiber-rich network to leverage several new forms of service, according to Leigh Wood, chief operating officer. Services that blur the television and personal computer will become especially popular, she predicts, noting that "we're looking for more, new content for 'enter-active' services."

China,

Continued from Page 14 will be given a quota for the number of channels it can place on the national cable network.

Conspicuous by their absence in the race to produce program channels are overseas companies. The doors to China's Internet and telecommunications businesses may be about to open, given China's new agreement with the United States. That pact could open foreign investment in both of those industry sectors in China — in exchange for U.S. backing on China's entry into the World Trade Organization. But like so many of China's revolutions, the present one unfolding in television is largely exclusive of foreign involvement, while open to domestic players to a far greater extent.

Many foreign companies are focusing on technology to get their foot in the market, hoping that access to the lucrative programming side will follow. But foreign channels are still banned from China, with the exception of transmission in three-star-and-above hotels and foreign residences and office developments. Hong Kong-based Phoenix TV, in which News Corp. holds a 45 percent stake, has managed to get landing rights in parts of southern China, but nothing more with official approval.

Direct foreign equity ownership of TV stations, cable networks and production companies remains prohibited. The ability for foreign indirect investment is also curtailed. For example, a ban on foreign trading of publicly traded media companies such as HME remains in effect.

A reminder that foreign channels are not welcome lock, stock and barrel came in May when the SARFT, the Ministry of Public Security and the Ministry of State Security launched a nationwide crackdown on unauthorized satellite reception of foreign channels.

Small underground companies in major cities around China were openly ignoring the 1993 regulations, enabling Chinese individuals to receive dozens of foreign channels for as little as \$US200 to \$US300. The skyline of Shanghai is dotted with tens of thousands of satellite dishes.

Not only individuals, but local operators, as well, were bringing down the channels and transmitting them over their cable networks to Chinese neighborhoods. Authorities warned that individuals would be fined for illegal satellite reception, while many companies engaged in the satellite installation were either fined or shut down. But just months after the crackdown, such businesses are back in action.

The government may have won a battle with the crackdown, but it has lost the war against illegal DTH. Most industry analysts believe it is just a matter of time before the government is forced to fully legitimize the DTH business, with some predicting that this will happen within three to five years. Only then will the government have a chance to regulate and profit from DTH.

Foreign content providers continue to bide their time, pursuing a strategy of creating programming blocks. They're mostly doing so on cable, but also are moving into terrestrial stations.

Companies taking this path include Channel [V], MTV, National Geographic, Discovery, Encore and ESPN. In some cases,



Most industry analysts believe it is just a matter of time before the government is forced to fully legitimize DTH.

programming from such foreign channels can account for up to half or more of a Chinese channel's lineup. Beijing Cable TV Sports Channel, for instance, says that one-third of its 18-hour broadcast day consists of ESPN programming. Similar proportions exist in other markets.

While some overseas channels are working to increase their daypart share, Phoenix TV is planning to increase its channels in the coming years to seven from three. A China-focused financial channel, plus a Mandarin channel for North America appear to be certainties, while the focus of the other channels is yet undecided.

Another, non-Phoenix, Chinadirected channel based in nearby Macau is also set for launch.

Feeling the heat from all its new competitors, CCTV is attempting to become more market oriented. With advertising rates falling in China and added competition for the nearly three dozen satellite channels now available, CCTV has started to drum up regional business. In June, CCTV held a seminar in the city of Dalian, to which it invited agencies and advertisers from China's northeastern provinces. That section of the country has been a major source of revenue for CCTV in the past. But lately, that income has been subject to erosion due to the new competitors. CCTV advertising department executives say the seminar was the first attempt by CCTV to acknowledge the threat from satellite channels, and other sessions are likely to follow.

"Revolution is not a dinner party," Chairman Mao once said. He might have been wrong when it comes to television though, because the table is already laid and the revolution is set to dig in.

Willie Brent is a Shanghai-based media and entertainment investment consultant and publisher of the newsletter CENews.

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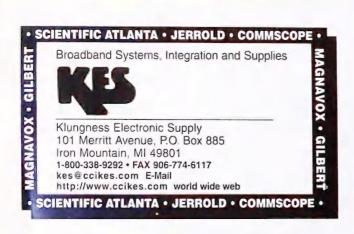
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Japan,

Continued from Page 18

it adds up to 10 million units by the debut of digital-terrestrial TV. With sets costing between 535,000 and 840,000 yen (\$US5,000 and \$US8,000), it could well be a bonanza for Japan's manufacturers.

While the industry considers the various financial equations for manufacturers and systems alike, many are also casting a hard cold look at the country's established program channels. There's a sense that in the future, channels will increasingly need to prove their attractiveness to customers. And a consolidation of the channel business is foreseen by some.

Jupiter's Nishimura says that his group is planning to add to its established stable of five majority-owned program channels and one minority owned network (it has a small stake in Nikkei CNBC). The inclination isn't to create channels from scratch, but rather



to acquire existing properties. "What we [want is] good attractive programming for Japanese women and, similarly, a channel for kids," he explains. "They have priority."

One clear priority for the cable systems involves telephony. They're are facing a major bone of contention involving NTT's dominant control of the national wired infrastructure.

Certainly, the cable industry scored a major coup when the MPT recently ruled that fiber optic lines of telecom carriers be utilized as cable-TV transmission lines, "What we [want is] good, attractive programming for Japanese women, and, similarly, a channel for kids. They have priority."

> — Yasushige Nishimura, chairman, Jupiter Programming Co. Ltd.

"on the premise of ensuring fair and effective competition." NTT, which was recently privatized, had strongly resisted such a move.

But despite that cable victory, NTT is still throwing around its weight. The telco's per-minute and interconnect rates are constantly cited as the reason for the high cost of communications in Japan. Many observers note that Japan is hobbled by such pricing practices exactly at a time when it needs lower rates to kick-start the Internet economy.

An MPT survey looking into Internet charges found that a continuous connection by a user in Tokyo costs 10 times more than what it costs in New York. The businesses hurting the most from NTT's usury charges are the larger cable systems companies. Several, among them Toku Cable in the Tokyo area, are offering low-cost telephony services and high-speed Internet connections to their customers.

Such services are just a part of Japan's master plan as it imple-

ments a series of digital networks in the first decade of the new millennium. Nationwide fiber optic networks will crisscross the archipelago with wireless-local-loop networks and a multimedia satellite communications system by 2010, if all goes as planned. And next year the world's first nationwide digital-mobile network will begin service. This will be followed by personal mobile-satellite communications using small terminal equipment, and a mobile multimedia-communications system slated for 2005.

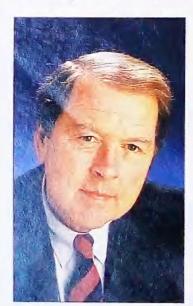
All this will help assure that the real-life occupants of Hill Housestyled homes will be fully equipped with a cornucopia of intelligent digital-household appliances. The growing pains may be causing the pay TV and telecommunications industries some grief now. But everyone seems bent on creating a totally wired, digital nation — with all the new gizmos and services that it promises.

TVA,

Continued from Page 21

Bear Stearns Cos. Inc. to facilitate a partial sale, in agreement, of course, with the Americans. However, the economic crisis sweeping Asia, Russia and then Brazil scuttled those plans.

Today, the eagerness of the foreign partners to exit appears to have cooled somewhat. At least that's the case at Hearst. According to Joslin, Hearst is "much more comfortable today with [TVA] than we were two or three years ago." That means it will be monitoring its investment, and



might even stay put, "if things come together ... and we have a good business."

But there are those, including Stanforth, who are skeptical that the foreign partners will remain for the long-term in a company with which they have had such a tempestuous history, and one in which they do not have equity control. There is no question that Abril is still seeking potential new investors for its pay TV subsidiary, though it remains unclear whether they want to sell a minority, or majority stake in TVA — or even sell the whole thing lock, stock and barrel.

The last option is not improbable, in the opinion of the Brazilian pay TV consultant Roger Karman. "Ultimately, [Abril] wants to get rid of distribution in cable and [wireless cable]. But they want to do it in an organized way and sell

"We are much more comfortable today with [TVA] than we were two or three years

ago."

 Ray Joslin, president, Hearst Entertainment & Syndication, and vice president, Hearst Corp.

at a reasonable price. That could take six months or two years, but they are not willing to sell out at any price," he says.

However, Stanforth believes that even Abril has not made the final call on that one. His guess is that it will want to keep at least one toe in this burgeoning communications company. "Abril is looking at the Internet right now. They probably want to hold on to their cable assets, even if it is a minority stake just to make sure that they have some hold on that pipeline," he says.

Certainly, Abril made clear its intention to become a full service-carrier, both itself and on behalf third parties. In that context, Moreira talks about forging alliances with telephony companies both as potential investors or business associates of some kind.

"[TVA] could offer to make some kind of association with fixed-telephony companies, longdistance mirror companies, and even MSOs could join TVA to create a large MSO distribution company that could [grow] to a greater potential," he says.

However those partnership ideas shake out, TVA is now putting its energy into increasing subscriber penetration in areas where it has already laid cable. To help that process along, it will continue plugging its basic programming package that targets Brazil's so-called C-class subscriber.

Many industry players consider this the best way to boost Brazil's 1.8-million cable-subscriber base, which is still overwhelmingly concentrated among the country's A and B socioeconomic classes. Of course, attacking the C class can be something of a double-edged sword. While a cheaper programming package might succeed in at-



tracting the less well-off, it also targets a demographic that is not as likely to pay bills on time, or at all, especially when the economy is under pressure.

To hedge against that potential pitfall, TVA is mulling a "prepaid" package that will enable subscribers to pre-select and prepay their cable programming. In this way, those living on tight budgets will be better able cut their cable bills on a month-to-month basis according to their incomes. Needless to say, there are some technical prerequisites for introducing this kind of system, among them, digital decoder boxes that work with a card function.

Beefing up its existing operations may be the immediate task at hand, but TVA is also very conscious of how to position itself in the Brazilian industry as a whole. That business is undergoing dramatic change due to the ongoing licensing of new cable franchises — a process that's bringing in a

host of new players. While TVA has made clear it does not have the money to pursue most of the new licenses that are up for grabs, it has been looking at other ways to consolidate its power. One such vehicle is the programming-buying group Neo TV, in which TVA is an active member.

Neo TV brings together many of the small- and medium-sized operators in Brazil that want to create a rival force to Globo Cabo, the lion that dominates Brazilian pay TV. Globo Cabo's programming-focused sister company, Globosat, not only produces its own lineup of original channels, but it also has a number of exclusive joint ventures with international programmers. And that strengthens Globosat's power in the market.

With Globo Cabo commanding such a tight grip, industry independents felt that it was necessary to create an alternative buying entity. While not a producer of content itself, Neo TV is able to negotiate programming rates and discounts with international programmers. In this way, individual operators get programming at a volume discount and aren't forced to negotiate through Globo Cabo or with the networks.

Clearly, Neo TV is making the road a little easier for TVA. But it's the interior streamlining put in place by Moreira that is most responsible for fostering TVA's stability. It remains to be seen whether he can fatten up the goose enough to attract the allies TVA so clearly seeks.

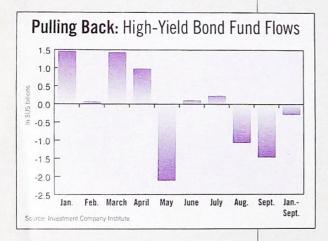
Taking Stock BY MIKE GALETT

FINANCING

Bond Blues

cable and Telecommunications high-yield debt issuers were full of holiday cheer at this time a year ago, with falling interest rates in the United States helping to open the doors to some huge deals. That hasn't quite been the case over recent months, as the U.S. Federal Reserve Board increased interest rates amid a stronger world economy and inflation worries Stateside.

This autumn saw at least a couple of



potentially breakthrough debt issues put on the back burner. The most prominent retreat came from Germany's Kirch Group, which in September held off on a 1.5 billion Deutsche mark (\$US900 million) bond sale, as rising rates and demand for a hefty risk-premium from investors made the sale too expensive for the company. Privately, analysts mention other cable and telecom debt deals that are

"It's generally a difficult market for any issuer that doesn't have an outstanding high-yield issue. Investors are looking for stories they know," says Don Cobin, an analyst with Conseco Capital Management, which holds international cable and telco debt. "For Kirch, it was a relatively new service regarding the relaunch of [digital platform] Premiere World,

and there were a lot of projections to be believed."

Through September of this year, U.S. investors had yanked \$US279 million from high-yield mutual funds, after adding \$US13.6 billion to them in 1998, according to the Washington, D.C.-based trade group Investment Company Institute.

Cobin also notes that Y2Krelated fears are holding investors at bay, and the market could begin to bounce back in January. "The domestic market

is fairly well saturated, and I wouldn't be surprised if investors start to look at the international market," he adds.

Still, some issuers with strong track records are keeping pace. European multiple system operator (MSO) United Pan-Europe Communications N.V., a darling of investors, in October sold \$US1.03 billion of debt.

Mamá Bell

AT&T CORP. JUMPED HEADFIRST into Latin America last month when it announced plans to create a new company that will focus on business-telecommunications services, a market it says is worth \$US16 billion and growing by 20 percent a year.

The move comes after the company tested the waters in August with its \$US300 million purchase of Netstream, a Brazilian company that provides telecommunications services to businesses. AT&T Latin America, as the new unit is known, will include the merged operations of Netstream, along with those of FirstCom

ATINO TELECOMS

Corp., a Florida-based company that provides business-telecoms services in Chile, Colombusiness-telecoms services servi

bia and Peru. AT&T Latin America expects to invest about \$US500 million over the next five years to fuel its growth, and looks to sell stock and possibly debt.

Analysts say focusing on business customers in Latin America is a smart move, and will help AT&T leverage its other assets. "If you consider that most multinationals probably deal with AT&T already, what you have is an entire continent that's asking for AT&T to come in and provide their service," notes David Taff, a Latin America media and telecoms debt analyst for Santander Investment.

Dialing for Pesos: AT&T Latin America

Base: Coral Gables, Fla.

CEO: Patricio Northland, former FirstCom CEO

Employees: 700

Investment: \$US500 million over five years

Ownership: AT&T, 60 percent; Promon Tecnologia,

6 percent; FirstCom shareholders, 34 percent

Customers: 1,600

Fiber optic network: 73,500 kilometers (45,900 miles)

Source: AT&T

AT&T Latin America will provide high-speed voice and data services, and is keen on Internet-protocol technology, says AT&T International Ventures president John Haigh, who adds that the project aims to expand into other markets.

AT&T's Liberty

Media International Inc., which is independently managed, owns stakes in cable systems in Argentina and Chile. However, AT&T Latin America won't partner with those systems, because of their residential focus and Liberty's autonomy. "Our global strategy requires us to target businesses," AT&T president John Zeglis says. "In that regard, cable is not within our global strategy."

THE PAY TV PAYOUT

Company	Ticker	Exchange	Close 10/15	Close 11/11	Percent Change	52-Week High	52-Week Low	Company	Ticker	Exchange	Close 10/15	Close 11/11	Percent Change	52-Week High	52-Week Low
AsiaSat	SAT	NYSE	\$24.63	\$26.13	6.09	\$29.25	\$13.75	Globo Cabo	GLCBY	Nasdag	\$5.06	\$6.50	28.40	\$7.50	\$1.00
At Home	ATHM	Nasdag	\$43.13	\$44.25	2.61	\$99.00	\$22.87	MIH	MIHL	Nasdaq	\$30.75	\$46.75	52.03	NA	NA
AT&T	T	NYSE	\$44.69	46.44	3.92	\$64.12	\$40.12	News Corp.	NWS	NYSE	\$27.56	\$30.81	11.79	\$37.62	\$22.50
British Telecom	BTY	NYSE	\$163.31	\$188.06	15.15	\$188.06	\$131.25	NTL	NTLI	Nasdag	\$73.63	\$93.06	26.40	\$107.37	\$45.37
BSkyB	BSY	NYSE	\$60.88	\$62.00	1.85	\$64.31	\$40.62	PanAmSat	SPOT	Nasdaq	\$39.50	\$39.50	0.00	\$45.43	\$26.37
Broadcom	BRCM	Nasdag	\$116.81	\$168.63	44.36	\$169.62	\$42.00	Rogers Comm.	RG	NYSE	\$15.88	\$21.63	36.22	\$23.93	\$7.81
Cablevision Syst.	CVC	AMEX	\$67.88	\$68.75	1.29	\$91.87	\$40.50	Scientific-Atlanta	SFA	NYSE	\$50.56	\$60.88	20.40	\$64.18	\$16.00
Cable & Wireless	CWZ	NYSE	\$50.94	\$54.13	6.26	\$67.00	\$39.75	Shaw Comm.	SJR	NYSE	\$27.50	\$29.00	5.45	\$46.50	\$19.75
C&W HKT	0008	Hong Kong	\$2.08	\$2.46	18.58	NA	NA	Telefónica	TEF	NYSE	\$49.06	\$53.44	8.92	\$54.93	\$41.18
Canal Plus	CNLP	Paris	\$63.60	\$71.99	13.19	NA	NA	Televisa	TV	NYSE	\$39.00	\$46.81	20.03	\$50.12	\$18.25
Deutsche Telekom	DT	NYSE	\$43.63	\$51.31	17.62	\$51.37	\$26.00	Telewest	TWSTY	Nasdag	\$38.88	\$46.50	19.61	\$52.81	\$20.56
Flextech	FLXT	London	\$15.22	\$16.59	8.97	NA	NA	UnitedGlobalCom	UCOMA	Nasdaq	\$78.63	\$102.88	30.84	\$104.87	\$12.50
General Instrument	GIC	NYSE	\$51.44	\$64.63	25.64	\$64.81	\$24.62	UPC	UPCOY	Nasdaq	\$67.25	\$87.75	30.48	\$88.00	\$31.12

Source: CNET Investor

ONE ON ONE

Canal Plus' Brave Nu World

MIKE GALETTO SPEAKS WITH ALEX BERGER

ention the company Canal Plus S.A., and the conversation is most likely to revolve around something happening on one of two screens: TV or film. But if the executives of the Paris-based company have their way, people will have a few more screens to talk about.

In September, Canal Plus formed a separate operating unit, Canal Numedia. It's focused on harnessing the company's strength in "traditional" electronic-media content and applying it to the Internet. At the same time, Canal Plus' 49-percent owner, Vivendi S.A., created its own Internet-focused unit, Vivendi Plus. The mission on that front is to create "bridges" between various communications platforms — be they televisions, computers or cellular phones — to form a seamless network.

The man with a plan for all those keyboards, keypads and remote controls is Alex Berger. He serves as chairman of Canal Numedia, and he's well versed in both content and Canal Plus' goals, having served as a senior advisor to Canal Plus CEO Pierre Lescure for the last five years.

It's hard not to notice the enthusiasm when Berger speaks of interactivity. And it's based on a solid track record, not just nifty sounding promises. Canal Plus has run interactive ads, produced by its Thematiques Regie division, since 1997. In one of its first forays in June of that year, about 3,000 viewers responded to an Audi advertisement offering a free test drive. Canal Plus estimates the ad helped sell about 500 vehicles.

And Canal Plus' Mediaguard conditional-access system provides viewers with access not only to pay-per-view programming, but also to a secure environment for interactive commerce and home banking.

In the following edited conversation, Berger talks about his new mission and what lies ahead.

GALETTO: I've heard Canal Numedia described as a "federation" of Web sites, and in a speech you gave at the European Cable Communications convention you used the world "community" quite a bit. Can you describe what's meant by those terms?

BERGER: Imagine a network of networks in the television sense of it. We have a whole lot of different brands [and] a whole lot of different sites, in a whole lot of different countries. Within the content of those sites, what we want to do is have a natural way of navigating from one to another. Numedia is tying together the diversity of what [Canal Plus] is talking about.

GALETTO: How many sites do you have now?

BERGER: About 40 to 50.

GALETTO: Where do you see the number in a year?

BERGER: About triple that.

GALETTO: Can you talk about the goals at Vivendi Plus?

BERGER: It's creating a seamless environment. We have affinity with our [TV] subscribers. Now we can interact with those subscribers and provide them with functions and experiences on different or separate platforms.

I want to be able to go from one environment to another. I want to be able to write an e-mail on my desktop, send it to my mother for her to read on her interactive television, and she can forward it to my sister on her [personal digital assistant] or mobile phone. That's the environment we're really creating.

We have all the elements of the food chain to be able to do so. We have the connectivity, the content and the commerce. Now we're building those technological bridges to make that experience full.

GALETTO: What will be the biggest revenue generators at Canal Numedia?

BERGER: There are going to be four different levels.

The first level is, of course, advertising. Let's start with "stupid" [untargeted] banners, then qualified banners and personalized banners [that are targeted to specific users]. That's a little more interesting.

Second: commerce, transactions. We have a lot of diversity in how we can do that. Recall that we already have secure transactions within our interactive-television environment. So we're coming from there. We also have a lot of things that we have created with our brand trust in the interactive mode, and we have those boutiques up and running already.

After commerce we have subscriptions. There are very, very few things that you would want to subscribe to on the Web. We've identified a couple in the area of content that are relevant. It's not a very big model, but it exists.

The last part is licensing of our content to other platforms.

GALETTO: Where is your content going to come from? Will a lot of it be an offshoot of your TV programming?

BERGER: We've had a Web site of our TV programming since the beginning of 1995.

What we're doing today is making sure that there are relevant and intelligent ways of tying together content. A movie on your PC today isn't very relevant. Tomorrow with broadband it will be more relevant. So we'll have to secure the right ways to do it.

Watching a movie on your cell phone is a pretty poor experience, but if we can get some sound-bites, some specs that are correlated to interviews, to information — a lot of other things we're doing in any case — we will build it into our new content.

And, of course, we're securing



ALEX BERGER

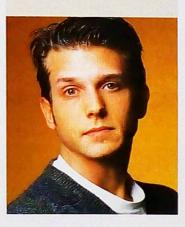
TITLE: Chairman, Canal Numedia

BACKGROUND:

Joined Canal Plus in 1994 as special advisor to chairman and CEO Pierre Lescure, later becoming his chief of staff and senior advisor. Prior to that, was a financial analyst, and had founded his own TV-production company.

STATISTICS:

37 years old; based in Paris; married with three children.



rights for this new environment. **GALETTO:** Are you talking with existing sites about parterships or or joint ventures?

BERGER: It's always possible. We're out for business, and how we want to do business is to build it ourselves. We want to aggregate it; we want to package it. We'll [also] go out and partner, or we'll go out and acquire.

GALETTO: I've read that a huge percentage of your TV subscribers are already using your interactive services.

BERGER: Yes, 90 percent of our

subscribers that have our interactive terminals use it.

GALETTO: What do you attribute that to?

BERGER: I think it's largely attributable to the fact that we took enough time to explain to our subscribers how it works and how easy it is. I think that's really important.

It's also very largely due to brand trust. We've always been very careful in how we wanted to explain things, how we wanted not to sell what was not natural for Canal Plus.

So, of course, when we get to the new media, we've established a lot of trust in what we're going to do. We're credible, we exist.

GALETTO: Will the Canal Numedia brand be something consumers are aware of?

BERGER: No, it's a corporate brand. It's an umbrella brand.

GALETTO: You're contemplating a Canal Numedia initial public offering. What's the motive there? BERGER: As we have to build to create our new environment, we also have to create the currency by which we can evolve, acquire and partner. We have to have that currency within the group to be able to do that.

GALETTO: What are some of the challenges that lie ahead?

BERGER: The biggest challenge is creating this new environment, where we have a lot of traditional businesses coming out of television. You have to create another dynamic with a different rhythm.

The first of our missions is really to be able to create this transversal company within that dynamic. Also, we have to create a lot of strong brands.

I feel like [Canal Plus' founder and first chairman] Andre Rousselet and [CEO] Pierre Lesecure in 1983, when they were thinking of pay television in France—the same sense of pioneering. I think it's the best time to be in this business.



Telephony. QoS. Tiered Services.



DOXcontroller DOCSIS CMTS

Tell us something we don't already know.

Telephony. Qos. Tiered Services. The features at the heart of the DOCSIS 1.1 cable data specification aren't news to us. At Com21, we've shipped over a quarter of a million cable modems, and we've developed and supported systems that handle thousands of subscribers utilizing these features. When we designed the new DOXCONTROLLER DOCSIS 1.1 Cable Modem Termination System, we built it from the ground up to address the real-world issues you'll face when you deploy next-generation DOCSIS 1.1 services. So when you're ready to take the next step in cable data, go with what we know. For more information, visit www.com21.com or call us at 1.408.953.9100.

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